

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SURFACE-WATER-QUALITY DATA FROM SELECTED SITES  
IN WASHINGTON AFFECTED BY MOUNT ST. HELENS ERUPTIONS:  
MARCH 27 - SEPTEMBER 30, 1980

By Gary L. Turney and John M. Klein

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## CONTENTS

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	Page
Abstract-----	1
Introduction-----	2
Acknowledgments-----	2
Methods of data collection-----	2
Definition of terms-----	4
References-----	6

## ILLUSTRATION

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FIGURE 1. Map showing location of sampling sites-----	3
---	---

## TABLE

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TABLE 1. Chemical analysis of water from selected stream sampling sites-----	7
---	---

## METRIC (SI) CONVERSION TABLE

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<u>Multiply</u>	<u>By</u>	<u>To obtain</u>
feet (ft)	0.3048	meters (m)
miles (mi)	1.609	kilometers (km)
acre-feet (acre-ft)	1233.0	cubic meters ( $m^3$ )
tons (short) (2,000 lb)	0.9072	tonnes (t)

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ABSTRACT

The volcanic eruptions of Mount St. Helens have resulted in the collection of many forms of hydrologic data. Chemical data collected from March 27 to September 30, 1980, to document the effects of the various volcanic events (mudflows, pyroclastic flows, deposition of ash) on the quality of surface water at selected sites in the State of Washington are presented in this report.

## INTRODUCTION

The initial eruption of Mount St. Helens on March 27, 1980, prompted the Washington District of the U.S. Geological Survey Water Resources Division to start an intensive water-quality data-collection effort at surrounding stream sites (fig. 1). After the first week of intensive sampling, weekly observations were continued at selected sites. At 8:32 a.m. on May 18, 1980, Mount St. Helens erupted violently. Following an explosive north-trending lateral blast, ash and other volcanic emanations were shot vertically to about 50,000 ft. Immediately north of the volcano, the forest was pyrolyzed and burned. Airborne ash was carried eastward and dispersed over eastern Washington and Idaho. Drainage basins immediately east of the volcano received heavy ash fall, whereas drainage basins to the south and tributaries to the Columbia River received only traces of ash. The North and South Forks Toutle River were devastated by massive mudflows that moved into the lower Cowlitz and Columbia Rivers.

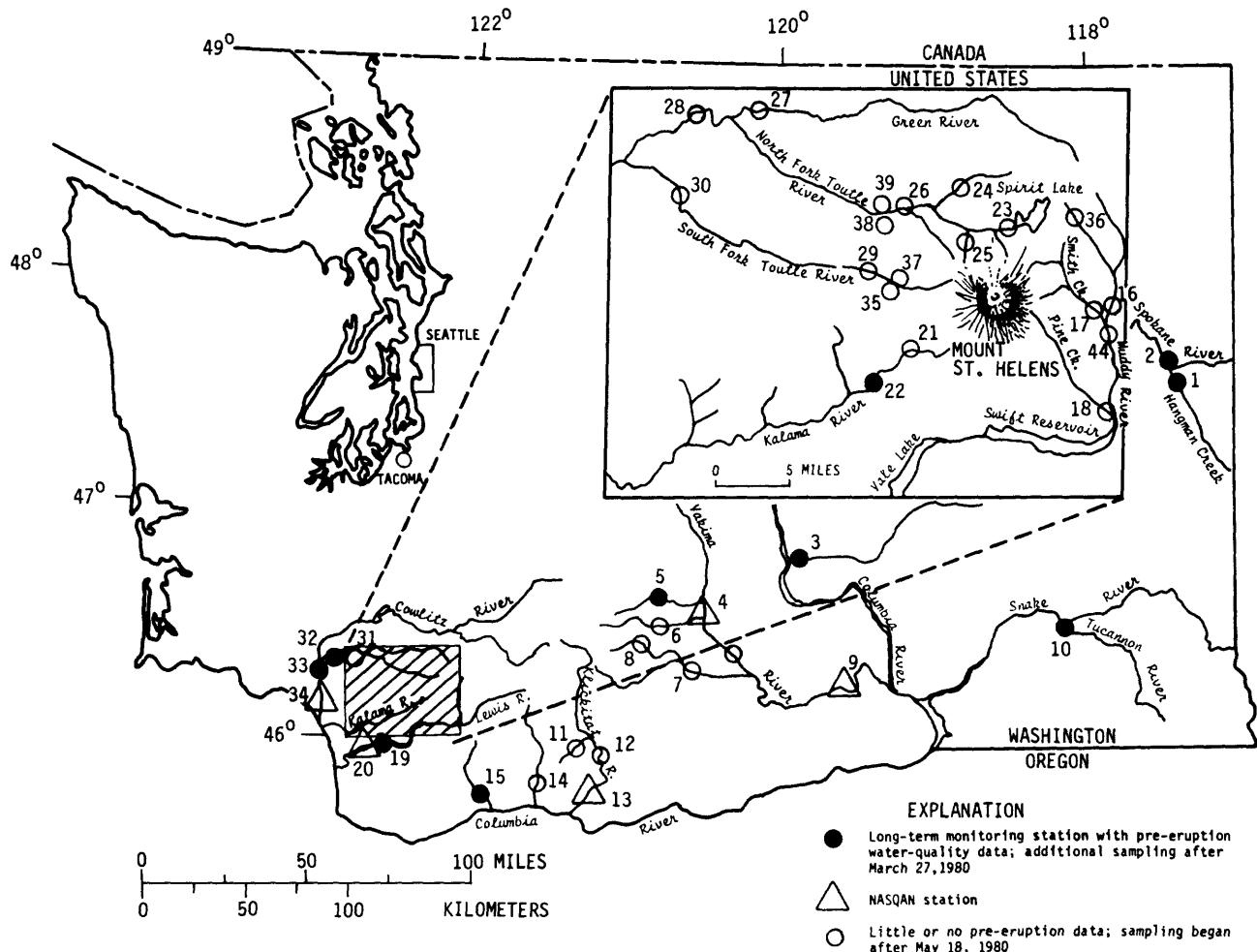
The massive physical alterations caused by the eruption were expected to have marked effects on river-water quality; these have been described by Klein (1981). This report contains the data documenting the magnitude and persistence of those changes (table 1).

## ACKNOWLEDGMENTS

The data included in this compilation represent the efforts of technicians from the Geological Survey's Spokane, Pasco, and Tacoma field offices.

## METHODS OF DATA COLLECTION

All samples for chemical analysis were collected from stream cross sections using depth-integrating samplers and methods (Guy and Norman, 1970). These sampling techniques assure collection of a sample that is representative of the average chemical conditions in the cross section of the stream at the time of sampling. Water samples for dissolved trace elements and selected major chemical-constituent analyses were filtered through a 0.45- $\mu\text{m}$  (micrometer) membrane filter, placed in acid-washed polyethylene bottles, and preserved with double-distilled, analytical-grade nitric acid to prevent chemical precipitation. Unfiltered samples were analyzed for total trace-element concentrations. Both filtered and unfiltered samples for nitrogen and phosphorus analysis were chilled at the time of collection and during shipment to the Geological Survey's National Water Quality Laboratory, Arvada, Colo. Constituents were analyzed by methods described by Skougstad and others (1979).



#### MOUNT ST. HELENS WATER-QUALITY SITES

1	12424003	Hangman Creek at mouth near Spokane	23	14240310	N.F. Toutle near Spirit Lake
2	12424200	Spokane at Riverside	24	14240350	Coldwater Creek near Spirit Lake
3	12472600	Crab Creek near Beverly	25	14240440	Castle Creek near Spirit Lake
4	12500450	Yakima at Union Gap	26	14240460	N.F. Toutle below Elk Creek near Spirit Lake
5	12500500	N.F. Ahtanum Creek near Tampico	27	14241000	Green River below Hatchery
6	12501000	S.F. Ahtanum Creek near Tampico	28	14241100	N.F. Toutle at Kid Valley
7	12506000	Toppenish Creek near Ft. Simcoe	29	14241460	S.F. Toutle below Disappointment Creek
8	12506300	N.F. Simcoe near Ft. Simcoe (White Swan)	30	14241500	S.F. Toutle near Toutle
9	12510500	Yakima at Kiona	31	14242690	Toutle River at Highway 99 bridge near Castle Rock (USGS)
10	13344520	Tucannon at Powers	32	14242700	Toutle near Castle Rock (also I-5 bridge, DOE)
11	14110720	Outlet Creek near Glenwood	33	14243000	Cowlitz at Castle Rock
12	14111500	Klickitat below Glenwood	34	14244200	Cowlitz at Kelso
13	14113000	Klickitat near Pitt	35	461219122171900	S.F. Toutle near Disappointment Creek (muddy side)
14	14123500	White Salmon near Underwood	36	461101122031300	Tributary to Muddy River near headwaters
15	14128500	Wind River near Carson	37	461215122171600	S.F. Toutle near Disappointment Creek (clear side)
16	14216100	Muddy River above Smith Creek	38	461758122253100	N.F. Toutle below Debris Dam (left side)
17	14216200	Smith Creek above mouth	39	461825122250900	N.F. Toutle below Debris Dam (right side)
18	14216900	Pine Creek at mouth	40	461742122233900	Green Pond #1 on debris dam
19	14220200	Lewis at Merwin Dam at Ariel (DOE only)	41	461743122234300	Red Pond #1 on debris dam
20	14220500	Lewis at Ariel (NASQAN)	42	461752122240600	Green Pond #2 on debris dam
21	14222249	Kalama above Falls	43	461926122294200	Seepage into creek near N.F. Toutle near Camp Baker
22	14222980	Kalama below Falls	44	461053122030700	Muddy River below Smith Creek

NOTE: sites 40-43 not on map due to uncertainty of location

FIGURE 1.--Location of sampling sites.

## DEFINITION OF TERMS

Dissolved refers to the amount of substance present in chemical solution. In practice, however, the term includes all forms of substance that will pass through a 0.45-micrometer membrane filter, and thus may include some very small (colloidal) suspended particles. Analyses are performed on filtered samples.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable mostly to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ( $\text{CaCO}_3$ ).

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment is also expressed in milligrams per liter, and is based on the mass of sediment per liter of water-sediment mixture.

Solute is any natural or artificial substance derived from the atmosphere, vegetation, soil, rocks, or other sources that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45- $\mu\text{m}$  membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all of the constituent in the sample.)

## REFERENCES

Guy, H. D., and Norman, V. W., 1970, Field methods for measurement of fluvial sediment, chap. C2, bk. 3, Applications of hydraulics: U.S. Geological Survey Techniques of Water-Resources Investigations, 59 p.

Klein, John M., 1981, Some chemical effects of the Mount St. Helens eruption on selected streams in the State of Washington: U.S. Geological Survey Circular 850-E.

Skoustad, V. V., and others, 1979, Methods for determination of inorganic substances in water and fluvial sediments, chap. C2, bk. 5: U.S. Geological Survey Techniques of Water-Resources Investigations, 626 p.

TABLE 1.--Chemical analysis of water from selected stream sampling sites

## 12424003 - HANGMAN CR. AT MOUTH AT SPOKANE

## WATER QUALITY DATA

		SPE- CIFIC CON- DUCT- ANCE	TIME (MICRO- MOHS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	0.7 COLI- FORM, FECAL, UM-MF (COLS./ 100 ML)	STREP- TOCCOCCI FECAL, (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	ACIDITY (MG/L AS CACO3)
APR , 1980											
08...	1515	180	7.9	7.4	--	--	--	--	--	--	--
MAY											
07...	0900	230	8.2	15.2	--	--	--	--	--	--	--
19...	1355	245	7.6	16.6	120	8.9	--	--	--	105	4.9
20...	1240	254	8.0	17.8	270	8.7	--	--	--	105	4.9
21...	1150	191	8.0	17.5	44	9.1	--	--	--	74	4.9
22...	1125	285	7.4	15.8	--	8.9	--	--	--	--	--
27...	1300	197	7.2	9.0	2600	9.9	>11000	4800	66	4.9	
28...	1240	193	7.8	11.4	--	9.8	--	--	--	--	--
JUN											
06...	0900	186	8.0	14.3	--	9.4	--	--	--	--	--
11...	1400	270	8.0	21.6	--	--	--	--	--	--	--
12...	1245	220	8.0	18.2	68	8.3	180	--	86	9.9	
19...	1230	166	7.8	20.1	110	8.2	240	100	60	--	
25...	1145	162	8.0	18.5	110	8.4	K650	970	64	--	
JUL											
30...	1200	365	8.6	21.6	5.0	12.2	68	84	160	.0	
AUG											
26...	1200	373	8.6	17.7	3.5	--	36	17	167	.0	
SEP											
23...	1200	360	8.7	13.1	2.2	13.1	130	11	166	.0	
		MAGNE- SIUM, DIS- SOLVED (MG/L AS CA)	SODIUM, DIS- SOLVED (MG/L AS MG)	POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LINITY (MG/L AS K)	CARBON DIOXIDE (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS CO2)	CHLO- RIDE, DIS- SOLVED (MG/L AS SO4)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	
APR , 1980											
08...	--	--	--	--	--	--	--	--	--	--	--
MAY											
07...	--	--	--	--	--	--	--	--	--	--	--
19...	28	8.5	11	3.0	100	3.9	12	5.2	.2	24	
20...	28	8.6	11	3.1	98	1.5	16	6.8	.2	24	
21...	20	5.9	7.6	1.8	60	.9	9.6	4.1	.1	24	
22...	--	--	--	--	--	--	--	--	--	--	
27...	18	5.2	9.4	4.0	13	1.3	57	16	.2	20	
28...	--	--	--	--	--	--	--	--	--	--	
JUN											
06...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
12...	23	7.1	8.8	3.4	92	1.4	11	6.1	.1	28	
19...	16	5.0	7.8	3.4	49	1.2	13	6.7	.2	--	
25...	17	5.4	7.4	5.4	60	.8	13	5.9	.2	--	
JUL											
30...	41	14	12	4.9	160	.6	21	9.6	.3	--	
AUG											
26...	42	15	12	--	170	.6	20	11	.2	--	
SEP											
23...	45	13	13	4.6	160	.5	17	9.6	.2	--	

## 12424003 - HANGMAN CR. AT MOUTH AT SPOKANE

## WATER QUALITY DATA

SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED	SOLIDS, DIS- (TONS PER AC-FT)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> SOLVED	NITRO- GEN, AMMONIA	NITRO- GEN, AMMONIA	NITRO- GEN, ORGANIC	NITRO- GEN, ORGANIC
DATE	(MG/L)	(MG/L)	(MG/L AS N)	(MG/L AS N)	(MG/L AS N)	(MG/L AS N)	(MG/L AS N)	(MG/L AS N)
<b>APR , 1980</b>								
08...	--	--	--	1.7	--	.150	--	--
MAY								
07...	--	--	--	1.1	--	.140	--	--
19...	157	152	.21	.58	.58	.160	.070	1.7
20...	161	157	.21	.68	.66	.180	.090	.75
21...	125	109	.17	.68	--	.090	.070	.22
22...	--	--	--	--	--	--	--	--
27...	127	138	.17	2.2	2.1	.890	.180	8.2
28...	--	--	--	--	--	--	--	--
JUN								
06...	--	--	--	--	--	--	--	--
11...	--	--	--	1.3	--	.180	--	--
12...	--	143	.19	1.0	1.0	.140	.000	.69
19...	125	--	.17	.84	.85	.090	.100	.44
25...	116	--	.15	.63	.63	.120	.040	.88
JUL								
30...	232	--	.31	1.1	1.1	.020	.030	.75
AUG								
26...	240	--	.32	1.5	1.4	.050	.020	.48
SEP								
23...	224	--	.30	1.0	.99	.000	.000	.50
								.56

NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH <sub>4</sub> + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, DIS. TOTAL (MG/L AS N)	NITRO- GEN, DIS. TOTAL (MG/L AS N)	PHOS- PHORUS, DISOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DISSOL. (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS C)
DATE	AS N)	AS N)	AS N)	AS N)	AS P)	AS P)	AS P)	AS C)
<b>APR , 1980</b>								
08...	--	--	--	--	--	.100	--	.050
MAY								
07...	--	--	--	--	--	.140	--	.080
19...	1.9	1.1	.77	2.4	1.4	.230	.070	--
20...	.93	.26	.67	1.6	1.3	.410	.080	--
21...	.31	--	--	.99	--	.160	.050	--
22...	--	--	--	--	--	--	--	--
27...	9.1	8.3	.77	11	2.9	1.700	.040	--
28...	--	--	--	--	--	--	--	--
JUN								
06...	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	.440	--	.090
12...	.63	.32	.51	1.8	1.5	.180	.090	--
19...	.53	.00	.57	1.3	1.4	.210	.080	--
25...	1.0	.40	.60	1.6	1.2	.300	.130	--
JUL								
30...	.77	.09	.68	1.8	1.8	.080	.040	--
AUG								
26...	.53	.00	.53	2.0	1.9	.030	.040	--
SEP								
23...	.50	.00	.56	1.5	1.6	.020	.030	--
								4.8

## 12424003 - HANGMAN CR. AT MOUTH AT SPOKANE

WATER QUALITY DATA											
DATE	ALUM- INUM, TOTAL	ALUM- INUM, SUS- PENDED	ALUM- INUM, DIS- SOLVED	ANTI- MONY, TOTAL (UG/L AS AL)	ANTI- MONY, SUS- PENDED TOTAL (UG/L AS SB)	ANTI- MONY, DIS- SOLVED TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	BARIUM, SUS- PENDED
MAY • 1980	19...•	500	480	20	--	--	4	2	2	100	30
	20...•	2200	2200	40	--	--	4	1	3	100	30
	21...•	640	590	50	0	0	4	2	2	100	70
	27...•	--	--	40	--	--	--	--	--	--	--
JUN											
	12...•	--	--	0	--	--	0	--	--	3	--
BERYL- LIUM, DIS- SOLVED (UG/L AS BA)	BORON, TOTAL, RECov- ERABLE (UG/L AS RE)	BORON, SUS- PENDED RECov- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	BORON, RECov- ERABLE (UG/L AS B)	BORON, SUS- PENDED RECov- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECov- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECov- ERABLE (UG/L AS CD)	CADMIUM TOTAL RECov- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECov- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECov- ERABLE (UG/L AS CR)
MAY • 1980	19...•	70	--	60	50	9	1	1	0	0	0
	20...•	70	--	60	50	10	1	1	0	0	0
	21...•	30	<1	40	30	10	0	--	<1	0	0
	27...•	--	--	--	--	20	--	--	--	--	--
JUN											
	12...•	70	<1	--	--	30	--	--	<1	--	--
CHRO- MUM, DIS- SOLVED (UG/L AS CR)	COHALT, TOTAL, RECov- ERABLE (UG/L AS CO)	COHALT, SUS- PENDED RECov- ERABLE (UG/L AS CO)	COHALT, DIS- SOLVED (UG/L AS CO)	COHALT, RECov- ERABLE (UG/L AS CO)	COHALT, SUS- PENDED RECov- ERABLE (UG/L AS CO)	COHALT, DIS- SOLVED (UG/L AS CO)	COPPER TOTAL RECov- ERABLE (UG/L AS CU)	COPPER SUS- PENDED RECov- ERABLE (UG/L AS CU)	COPPER TOTAL RECov- ERABLE (UG/L AS CU)	COPPER SUS- PENDED RECov- ERABLE (UG/L AS CU)	COPPER SUS- PENDED RECov- ERABLE (UG/L AS FE)
MAY • 1980	19...•	0	0	0	0	25	17	8	3900	3900	20
	20...•	0	2	2	0	27	20	7	5100	5100	40
	21...•	0	0	--	<3	10	--	<10	1400	1400	26
	27...•	--	--	--	--	--	--	--	--	--	270
JUN											
	12...•	0	--	--	<3	--	--	<10	--	--	74

## 12424003 - HANGMAN CR. AT MOUTH AT SPOKANE

## WATER QUALITY DATA

DATE	LEAD,		LITHIUM		LITHIUM		MANGA-		MANGA-	
	TOTAL RECOV- ERABLE (UG/L)	SUS- PENDED RECOV- ERABLE (UG/L)	LEAD, DIS- SOLVED (UG/L)	TOTAL RECOV- ERABLE (UG/L)	PENDED RECOV- ERABLE (UG/L)	LITHIUM DIS- SOLVED (UG/L)	NESE, RECOV- ERABLE (UG/L)	TOTAL RECOV- ERABLE (UG/L)	SUS- PENDED RECOV- ERABLE (UG/L)	NESE, RECOV- ERABLE (UG/L)
	AS PB)	AS PB)	AS PB)	AS LI)	AS LI)	AS MN)	AS MN)	AS MN)	AS MN)	
MAY , 1980										
19...	12	12	0	10	--	<4	130	110	20	
20...	44	42	2	10	6	4	160	130	30	
21...	5	--	<10	10	--	<4	70	70	2	
JUN										
12...	--	--	54	--	--	<4	--	--	16	

DATE	MERCURY		MOLYB-		NICKEL,		NICKEL,		SELE-	
	MERCURY TOTAL RECOV- ERABLE (UG/L)	SUS- PENDED RECOV- ERABLE (UG/L)	MERCURY DIS- SOLVED (UG/L)	DENUM, SOLVED (UG/L)	TOTAL RECOV- ERABLE (UG/L)	PENDED RECOV- ERABLE (UG/L)	NICKEL, DIS- SOLVED (UG/L)	SELE- NIUM, TOTAL (UG/L)	SUS- PENDED RECOV- ERABLE (UG/L)	SELE- NIUM, TOTAL (UG/L)
	AS HG)	AS HG)	AS HG)	AS MO)	AS NI)	AS NI)	AS SE)	AS SE)	AS SE)	
MAY , 1980										
19...	.0	.0	.0	--	5	2	3	0	0	
20...	.1	.1	.0	--	6	4	2	0	0	
21...	.1	.1	.0	<10	5	2	3	0	0	
JUN										
12...	--	--	.0	<10	--	--	3	--	--	

DATE	SILVER*		STRON-		VANA-		ZINC*	
	SELE- NIUM, DIS- SOLVED (UG/L)	SILVER, TOTAL RECOV- ERABLE (UG/L)	SUS- PENDED RECOV- ERABLE (UG/L)	SILVER, DIS- SOLVED (UG/L)	TIUM, DIS- SOLVED (UG/L)	DIUM, DIS- SOLVED (UG/L)	RECOC- ERABLE (UG/L)	ZINC, DIS- SOLVED (UG/L)
	AS SE)	AS AG)	AS AG)	AS AG)	AS SR)	AS V)	AS ZN)	
MAY , 1980								
19...	0	0	0	0	--	--	30	<3
20...	0	0	0	0	--	--	30	<3
21...	0	0	0	0	100	<6.0	20	<3
JUN								
12...	0	--	--	0	130	8.0	--	<3

## 12424200 - SPOKANE R., AT RIVERSIDE STATE PARK AT SPOK, WA

## WATER QUALITY DATA

DATE	TIME	SPE-	TEMPER-			TUR-	OXYGEN,	COLI-	STREP-	HARD-	ACIDITY
		CIFIC	DUCT-	PH	ATURE,	BID-	DIS-	FECAL,	TOCCUCCI		
		CON-	ANCE	FIELD	WATER	ITY	SOLVED	0.7 UM-MF (COLS./ 100 ML)	KF AGAR (COLS. PER 100 ML)	AS (MG/L)	AS (MG/L)
<b>APR , 1980</b>											
09...	0930	113		7.5	5.5	2.0	12.0	3900	--	45	--
MAY											
19...	1150	74		7.2	12.8	15	10.8	--	--	31	.0
20...	1030	110		7.6	12.6	12	9.9	--	--	47	.0
21...	1030	91		7.8	13.8	7.4	9.9	--	--	37	.0
22...	1030	125		7.7	13.7	--	--	--	--	--	--
27...	1135	79		7.7	11.9	270	11.1	>800	K300	27	.0
28...	1200	65		7.8	12.7	--	11.3	--	--	--	--
JUN											
06...	0815	105		7.7	12.4	--	10.2	--	--	--	--
12...	1040	74		7.7	14.6	1.9	10.5	300	--	28	--
19...	1110	64		7.6	16.2	4.5	10.6	56	K21	25	4.9
25...	0930	100		7.9	17.3	3.8	9.2	76	K21	39	4.9
JUL											
08...	0900	115		7.6	18.0	1.8	9.0	K960	--	47	--
30...	1030	163		8.0	18.8	1.3	9.9	K7	<2	77	.0
AUG											
21...	0845	149		7.7	17.7	1.6	8.5	210	--	63	--
SEP											
22...	0745	137		7.8	13.6	1.2	9.0	480	--	60	--

DATE	CALCIUM	MAGNE-	SODIUM,	POTAS-	CARBON	SULFATE	CHLO-	FLUO-	SILICA,	
	DIS-	SOLUM,	DIS-	SIUM,	ALKAL-	DIUXIDE	DIS-	RIDE,	DIS-	
	SOLVED	SOLVED	SOLVED	SOLVED	LINITY	DIS-	SOLVED	DIS-	DIS-	
	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	
	AS CA)	AS MG)	AS NA)	AS K)	CACO3)	AS CO2)	AS SO4)	AS CL)	AS F)	SI02)
<b>APR , 1980</b>										
09...	12	3.8	3.2	1.2	32	1.6	13	2.8	--	8.4
MAY										
19...	8.4	2.5	2.0	.8	21	2.1	7.9	.3	.1	8.2
20...	12	4.3	2.6	1.0	37	1.4	18	.7	.1	9.2
21...	9.7	3.2	1.7	.7	34	.8	7.4	1.0	.1	8.8
22...	--	--	--	--	--	--	--	--	--	--
27...	7.4	2.2	2.8	1.0	15	.4	12	3.1	.1	9.5
28...	--	--	--	--	--	--	--	--	--	--
JUN										
06...	--	--	--	--	--	--	--	--	--	--
12...	8.0	2.1	2.7	.9	27	.8	2.2	2.0	--	8.2
19...	7.1	2.0	1.9	--	21	.8	8.8	1.5	.1	--
25...	10	3.6	2.4	--	36	.7	10	15	.2	--
JUL										
08...	12	4.2	2.6	1.0	43	1.7	8.9	1.8	--	8.1
30...	20	6.7	3.9	1.5	65	1.0	18	1.9	.2	--
AUG										
21...	16	5.7	3.5	1.8	57	1.8	12	3.2	--	8.9
SEP										
22...	15	5.5	3.3	1.3	48	1.0	10	3.9	--	8.3

## 12424200 - SPOKANE R. AT RIVERSIDE STATE PARK AT SPOK, WA

## WATER QUALITY DATA

SOLIDS, RESIDUE AT 180 DEG. C	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED	SOLIDS, DIS- SOLVED	RESIDUE AT 105 DEG. C, PER AC-FT)	NITRO- GEN, NO2+NO3 PFNUED	NITRO- GEN, NO2+NO3 AS N)	NITRO- GEN, DIS- SOLVED	NITRO- AMMONIA TOTAL AS N)	NITRO- GEN, AMMONIA TOTAL AS N)	NITRO- GEN, DIS- SOLVED	NITRO- GEN, ORGANIC TOTAL AS N)
APR , 1980										
09...	71	63	.09	0	.40	--	.260	--	.54	--
MAY										
19...	44	43	.06	--	.18	.18	.130	.030	.20	.23
20...	63	70	.08	--	.07	.00	.010	.000	.65	.62
21...	54	53	.07	--	.18	.15	.060	--	.49	--
22...	--	--	--	--	--	--	--	--	--	--
27...	40	47	.05	--	.31	.30	.200	.070	3.5	.59
28...	--	--	--	--	--	--	--	--	--	--
JUN										
06...	--	--	--	--	--	--	--	--	--	--
12...	51	42	.06	6	.15	--	.090	--	.48	--
19...	42	--	.05	--	.10	.10	.040	.030	.53	.32
25...	54	--	.07	--	.18	.20	.030	.040	.34	.25
JUL										
08...	68	64	.09	0	.21	--	.000	--	.43	--
30...	91	--	.12	--	.59	.62	.100	.100	.68	.72
AUG										
21...	89	85	.12	4	.62	--	.350	--	2.6	--
SEP										
22...	90	76	.12	7	.33	--	.000	--	.37	--

NITRO- GEN,AM- MONIA + ORGANIC	NITRO- GEN,NH4 + ORG.	NITRO- GEN,AM- MONIA + ORGANIC	NITRO- GEN, DIS. TOTAL (MG/L DATE AS N)	NITRO- GEN, DIS- SOLVED TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED TOTAL (MG/L AS P)	PHOS- PHORUS, DISSOL. TOTAL (MG/L AS P)	PHOS- PHORUS, ORGANIC TOTAL (MG/L AS C)	
APR , 1980										
09...	.80	--	--	1.2	--	.050	--	.000	2.2	
MAY										
19...	.33	.07	.26	.51	.44	.060	.010	--	--	
20...	.66	.04	.62	.73	.62	.040	.010	--	--	
21...	.55	.02	.53	.73	.68	.050	--	--	--	
22...	--	--	--	--	--	--	--	--	--	
27...	3.7	3.0	.66	4.0	.96	.290	.020	--	--	
28...	--	--	--	--	--	--	--	--	--	
JUN										
06...	--	--	--	--	--	--	--	--	--	
12...	.57	--	--	.72	--	.030	--	.010	2.1	
19...	.57	.22	.35	.67	.45	.040	.010	--	--	
25...	.37	.08	.29	.55	.49	.050	.010	--	--	
JUL										
08...	.43	--	--	.64	--	.030	--	.020	2.1	
30...	.78	.00	.82	1.3	1.4	.060	.030	--	--	
AUG										
21...	3.0	--	--	3.6	--	.030	--	.010	3.9	
SEP										
22...	.37	--	--	.70	--	.040	--	.010	2.7	

12424200 - SPOKANE R. AT RIVERSIDE STATE PARK AT SPOKANE

WATER QUALITY DATA

		CORAL 1				CORAL 2			
		SUS-	PENDE-	HORON•	CADMIUM	SUS-	MUM•	TOTAL	CHRO-
		DIS-	RECOV-	HORON•	TOTAL	PENDED	MUM	SUS-	MUM•
		RECOV-	ERABLE	DIS-	RECOV-	DIS-	PENDED	PENDED	PENDED
		ERABLE	ERABLE	SOLVED	ERABLE	SOLVED	RECOV-	RECOV-	RECOV-
		(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	RECAB.	RECAB.	RECAB.
		(AS CR)	(UG/L)	(UG/L)	(UG/L)				
DATE	TIME	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
APR 09...	1980	--	--	--	--	--	--	--	--
MAY 19...		--	--	--	--	--	--	--	--
JUN 20...		30	30	0	1	1	0	0	0
JUL 21...		50	20	30	1	1	0	0	0
AUG 22...		<1	2	0	4	1	<1	0	0
SEP 22...		--	--	0	--	--	--	--	--
OCT 22...		--	--	--	2	--	--	--	--
NOV 22...		--	--	--	--	--	<1	--	--
DEC 22...		--	--	--	--	--	<1	--	--

## 12424200 - SPOKANE R. AT RIVERSIDE STATE PARK AT SPOKANE

## WATER QUALITY DATA

DATE	COPPER*				IRON*				LEAD*				LITHIUM*			
	COPPER• SUS- PENDED	COPPER• TOTAL	COPPER• DIS- RECOV- ERABLE	COPPER• SOLVED	IRON• SUS- PENDED	IRON• TOTAL	IRON• DIS- RECOV- ERABLE	IRON• SOLVED	LEAD• SUS- PENDED	LEAD• TOTAL	LEAD• DIS- RECOV- ERABLE	LEAD• SOLVED	LFBAD• SUS- PENDED	LFBAD• TOTAL	LFBAD• DIS- RECOV- ERABLE	LFBAD• SOLVED
	(UG/L AS CU)	(UG/L AS CU)	(UG/L AS CU)	(UG/L AS CU)	(UG/L AS FE)	(UG/L AS FE)	(UG/L AS FE)	(UG/L AS FE)	(UG/L AS PH)	(UG/L AS PH)	(UG/L AS PH)	(UG/L AS PH)	(UG/L AS LI)	(UG/L AS LI)	(UG/L AS LI)	(UG/L AS LI)
APR * 1980	--	--	--	--	2	--	--	--	--	--	--	--	0	--	--	--
MAY	19***	0	12	8	4	730	710	20	29	29	0	0	0	0	0	0
	20***	0	6	4	2	380	360	20	9	6	3	0	0	0	0	0
	21***	<3	5	--	<10	40	20	23	0	--	<10	0	0	0	0	0
	27***	--	--	--	--	--	--	130	--	--	--	--	--	--	--	--
JUN	12***	--	6	--	--	110	--	--	9	--	--	--	--	--	--	--
JUL	08***	--	--	--	2	--	--	--	--	--	0	--	--	--	--	--
AUG	21***	--	--	--	1	--	--	--	--	--	4	--	--	--	--	--
SEP	22***	--	8	--	--	90	--	--	8	--	--	--	--	--	--	--
	APR * 1980	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MANGANESE*	MANGANESE• SUS- PENDED	MANGANESE• TOTAL	MANGANESE• DIS- RECOV- ERABLE	MANGANESE• SOLVED	MERCURY SUS- PENDED	MERCURY TOTAL	MERCURY DIS- RECOV- ERABLE	MERCURY SOLVED	MOLYH- DENIM• SUS- PENDED	MOLYH- DENIM• TOTAL	MOLYH- DENIM• DIS- RECOV- ERABLE	MOLYH- DENIM• SOLVED	NICKEL• SUS- PENDED	NICKEL• TOTAL	NICKEL• DIS- RECOV- ERABLE	NICKEL• SOLVED
	(UG/L AS MN)	(UG/L AS MN)	(UG/L AS MN)	(UG/L AS MN)	(UG/L AS HG)	(UG/L AS HG)	(UG/L AS HG)	(UG/L AS HG)	(UG/L AS MO)	(UG/L AS MO)	(UG/L AS MO)	(UG/L AS MO)	(UG/L AS NI)	(UG/L AS NI)	(UG/L AS NI)	(UG/L AS NI)
	09***	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY	19***	<4	40	30	7	0	0	0	--	--	7	4	3	3	2	2
	20***	<4	20	10	6	0	0	0	--	--	5	3	2	2	2	2
	21***	5	10	6	4	.1	.1	.0	<10	3	0	0	0	0	0	0
	27***	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN	12***	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL	08***	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG	21***	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP	22***	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

## 12424200 - SPOKANE R. AT RIVERSIDE STATE PARK AT SPOKANE

## WATER QUALITY DATA

DATE AS ST	SELE- NIUM, SUS- PENDED NIUM, TOTAL TOTAL (UG/L AS St)	SELE- NIUM, SUS- PENDED NIUM, TOTAL NIUM, RECOV- ERABLE (UG/L AS SE)	SILVER, SUS- PENDED NIUM, TOTAL NIUM, RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- PENDED NIUM, RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- PENDED NIUM, RECOV- ERABLE (UG/L AS SR)	SILVER, SOLVED NIUM, RECOV- ERABLE (UG/L AS AG)	SILVER, SOLVED NIUM, RECOV- ERABLE (UG/L AS ZN)	VANA- DIUM, DIS- SOLVED NIUM, RECOV- ERABLE (UG/L AS V)	ZINC, TOTAL, DIS- SOLVED NIUM, RECOV- ERABLE (UG/L AS ZN)	
			09***	--	--	0	--	--	--	140
MAY										
19***	0	0	0	0	0	0	0	--	160	70
20***	0	0	0	0	0	0	0	--	110	30
21***	0	0	0	0	0	0	0	<6.0	4.0	10
27***	--	--	--	--	--	--	--	--	--	--
JUN										
17***	0	--	--	--	--	--	--	--	120	--
JUL										
03***	--	--	0	--	--	0	--	--	--	70
AUG										
21***	--	--	0	--	--	0	--	--	--	50
SEP										
22***	0	--	--	--	--	--	--	100	--	--

## WATER QUALITY DATA

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHRS)		TEMPERATURE, WATER (DEG C)		TURBIDITY (NTU)		OXYGEN, DIS-SOLVED (MG/L)		HARDNESS AS (CaCO <sub>3</sub> ) (MG/L)		CALCIUM DIS-SOLVED (MG/L)		MAGNESIUM DIS-SOLVED (MG/L)		SODIUM, DIS-SOLVED (MG/L)		POTASSIUM, DIS-SOLVED (MG/L)	
		PH (UNITS)	FRIED (UNITS)	8.5	12.5	8.2	19.2	21.0	23	9.4	11.1	196	14	39	24	4.3	28	88	12
APR 14...	1940	7.0	7.0	8.5	12.5	8.2	19.2	21.0	23	9.4	11.1	196	14	39	24	4.3	28	88	12
MAY 12...	1225	6.5	7.1	8.2	12.5	8.0	19.2	21.0	23	9.4	11.1	196	14	39	24	4.3	28	88	12
JUN 06...	1020	6.3	6.3	8.0	11.30	6.3	16.4	18.4	13	9.4	10.4	188	9.9	39	21	5.6	56	8.7	9.0
10...	1130	6.3	6.3	8.0	11.30	6.3	16.4	18.4	20	9.4	10.4	188	9.9	39	22	5.4	54	8.5	9.0
16...	1310	6.2	6.2	8.0	11.30	6.2	16.4	18.4	22.2	--	--	179	--	37	21	5.7	57	9.0	10
17...	1056	6.0	6.0	8.0	1130	6.0	18.8	18.8	3.0	8.8	10.8	188	9.9	38	22	6.3	63	10	10
24...	1130	6.0	6.0	8.0	1130	6.0	19.4	42	--	--	--	188	9.9	39	22	5.7	57	7.9	7.9
JUL 01...	1100	6.0	6.0	8.0	24.3	4.0	24.3	4.0	7.5	10.4	--	--	--	39	21	5.2	52	8.4	8.4
AUG 14...	1030	6.5	6.5	8.0	17.0	2.5	9.1	20.7	0.0	0.0	0.0	10.4	0.0	4.3	24	5.7	57	7.9	7.9
SEP 15...	1215	8.0	8.0	8.0	19.2	9.2	7.0	2.5	0.0	0.0	0.0	10.4	0.0	4.3	24	5.7	57	7.9	7.9
15...	260	2.0	14.0	4.0	2.0	2.0	36	26	--	--	--	4.0	2.0	--	--	1.6	--	--	0.020
ALKALINITY (MG/L)		SILICATE (AS CO <sub>3</sub> )	SULFATE (AS SO <sub>4</sub> )	CHLORIDE (AS CL)	FLUORIDE (AS F)	SILICA, DIS-SOLVED (MG/L)	SILICA, DIS-SOLVED (MG/L)	SILICA, DIS-SOLVED (MG/L)	SILICA, DIS-SOLVED (MG/L)	SOLVENTS (MG/L)	SOLVENTS (MG/L)	SOLVENTS (MG/L)	SOLVENTS (MG/L)	SOLVENTS (MG/L)	SOLVENTS (MG/L)	SOLVENTS (MG/L)	NITRATE GEN, NO <sub>2</sub> +NO <sub>3</sub> (MG/L)	NITROGEN GEN, NO <sub>2</sub> +NO <sub>3</sub> (MG/L)	
APR 14...	1930	2.0	1.0	1.0	1.0	36	--	--	--	--	--	--	--	--	--	--	1.3	--	0.040
MAY 12...	220	2.0	2.0	0.7	2.0	26	--	--	--	--	--	--	--	--	--	1.2	1.2	0.040	
C24...	220	2.0	3.0	0.4	0.4	28	0	2.3	2.3	44.0	42.3	42.3	42.3	42.3	42.3	42.3	42.3	42.3	42.3
JUN 06...	2010	3.1	1.0	7.4	2.5	2.5	0.5	2.1	2.0	37.0	365	365	365	365	365	365	365	365	365
10...	1910	1.0	1.0	7.4	2.1	2.1	0.5	2.3	2.3	36.5	355	355	355	355	355	355	355	355	355
16...	2110	1.0	1.0	7.4	2.1	2.1	0.5	2.3	2.3	--	--	--	--	--	--	--	--	--	--
17...	2110	0.2	0.2	7.4	2.5	2.5	0.1	2.1	2.1	40.3	388	388	388	388	388	388	388	388	388
C24...	1910	0.2	0.2	7.4	2.2	2.2	0.5	2.1	2.1	37.5	363	363	363	363	363	363	363	363	363
JUL 01...	2010	1.0	1.0	7.4	2.2	2.2	0.3	2.3	2.3	38.1	363	363	363	363	363	363	363	363	363
2110	1.0	1.0	7.4	2.2	2.2	0.6	2.6	2.6	39.2	389	389	389	389	389	389	389	389	389	389
19...	260	2.0	14.0	4.0	2.0	2.0	36	29	0.6	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5

## 12412600 - CRAH CR NR BEVERLY, WASH.

WATER QUALITY DATA											
DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, MONIA + ORG. TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHOPH- OSPHATE DISSOL. (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DISSOLVED (MG/L AS P)
APR • 1980	--	1.2	--	--	1.3	--	--	--	--	200	--
MAY	--	2.0	--	2.1	--	--	2.9	--	160	060	.050
12•••	•0.0	•.59	•4.3	•63	•20	.43	3.4	1.6	.100	•070	--
29•••	•0.0	•0.0	•0.0	•0.0	•80	1.0	•20	•40	•210	•030	--
JUN	•0.0	1.0	•4.3	•4.3	•1.1	•61	•49	2.5	•170	•030	--
10•••	--	1.0	--	--	1.0	--	--	•6	•140	•030	--
16•••	--	1.0	--	--	1.1	•73	•33	2.4	•210	•050	--
17•••	•0.40	1.0	1.3	1.3	•1.1	•00	1.4	2.5	2.8	•190	.080
24•••	•0.30	1.0	1.3	1.3	•1.1	•80	1.9	4.5	3.9	•200	.050
JUL	--	0.0	2.1	1.9	2.1	--	--	--	--	•30	--
AUG	--	0.0	•.96	•.96	•.93	•96	•3.1	3.3	•110	•060	--
19•••	•0.0	•.99	1.3	1.3	•1.0	1.4	•3.5	3.4	•230	•160	--
SEP	•0.20	1.4	1.3	1.3	1.3	--	--	--	--	--	--
15•••	--	--	--	--	--	--	--	--	--	--	--
APR • 1980	--	--	--	--	--	--	--	--	--	--	--
WATER QUALITY DATA											
DATE	ALUM- INUM, TOTAL SUS- PENDED RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED REC'D. (UG/L AS AL)	ALUM- INUM, TOTAL SOLVED (UG/L AS AL)	ANTI- MONY, PT INDU TOTAL (UG/L AS SR)	ANTI- MONY, TOTAL (UG/L AS SR)	ANTI- MONY, SUS- PENDED TOTAL (UG/L AS SR)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED TOTAL (UG/L AS AS)	BARIUM, SUS- PENDED TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, TOTAL, RECOV- ERABLE (UG/L AS BA)
APR • 1980	--	--	--	--	--	--	--	--	--	8	--
14•••	--	--	--	--	--	--	--	--	--	5	--
MAY	--	--	--	--	0	0	7	0	7	100	50
12•••	--	--	--	--	0	0	7	1	6	100	50
29•••	--	--	--	--	--	--	--	--	5	100	50
JUN	290	270	20	0	0	0	7	1	6	100	50
10•••	1200	1200	50	0	0	0	6	0	6	100	50
16•••	--	--	--	--	--	--	--	--	5	0	0
17•••	1100	1100	10	--	--	--	7	1	6	100	50
24•••	1600	1600	30	--	--	--	6	0	6	100	50
JUL	--	100	0	--	--	--	7	0	7	100	50
AUG	210	100	20	--	--	--	6	0	6	100	40
19•••	540	220	10	--	--	--	8	1	7	100	30
SEP	260	270	10	--	--	--	--	--	--	--	--
15•••	--	--	--	--	--	--	--	--	--	--	--

## WAFER QUALITY DATA

DATE	APR 9 1980	HORUN*						HORUN*						CHRO-MIUM*					
		HORUN*	SUS-PENDED	CADMUM TOTAL	CADMUM DIS-RECOVERABLE	CADMUM SOLVED (UG/L AS CR)	CHRO-MIUM SUS-PENDED	CHRO-MIUM TOTAL	CHRO-MIUM SUS-PENDED										
BARIUM, DIS-SOLVED (UG/L AS BA)	14... MAY	60	--	--	--	--	--	<1	--	--	20	--	--						
	12... JUN	40	--	--	--	--	--	<1	0	0	0	0	--						
	29... JUN	50	<1	60	10	50	0	<1	0	0	0	0	--						
	06... JUL	50	<1	70	40	30	0	<1	0	0	0	0	--						
	10... JUL	50	<1	60	0	80	0	<1	0	0	0	0	--						
	16... JUL	50	--	--	--	--	--	<1	--	0	0	0	--						
	17... JUL	50	<1	70	10	60	0	<1	30	30	0	0	1						
	24... JUL	50	<1	80	20	60	0	<1	0	0	0	0	2						
	21... AUG	50	<1	60	10	20	0	<1	0	0	10	0	--						
	19... SEP	60	<1	40	30	60	0	<1	0	0	0	0	--						
	15... SEP	70	<1	90	20	70	0	<1	0	0	0	0	--						

WAFF	APR 9 1980	IRON*						IRON*						LEAD, SUS-PENDED						LITHIUM SUS-PENDED	
		COPPER, TOTAL	COPPER, DIS-SOLVED	COPPER, ERASBLE (UG/L AS CU)	IRON, TOTAL	IRON, DIS-SOLVED	IRON, ERASBLE (UG/L AS FE)	IRON, TOTAL	IRON, DIS-SOLVED	IRON, ERASBLE (UG/L AS FE)	LEAD, TOTAL	LEAD, DIS-RECOVERABLE	LEAD, SOLVED (UG/L AS PB)	LEAD, TOTAL	LEAD, DIS-RECOVERABLE	LEAD, SOLVED (UG/L AS LI)	LITHIUM TOTAL	LITHIUM DIS-RECOVERABLE	LITHIUM SOLVED (UG/L AS LI)		
COBALT, DIS-SOLVED (UG/L AS CO)	14... MAY	--	--	4	--	--	--	--	--	--	--	--	--	--	37	--	--	--	--		
	16... JUN	--	--	2	--	--	--	--	--	--	--	--	--	27	--	--	--	--	--		
	29... JUN	<3	9	<10	820	810	15	6	6	--	<10	10	10	2	0	0	0	0	0		
	06... JUL	<3	10	<10	<400	2400	11	8	--	--	<10	10	0	0	0	0	0	0	0		
	10... JUL	<3	12	<10	2400	2400	15	4	--	--	<10	10	10	1	0	0	0	0	0		
	16... JUL	--	--	6	--	--	--	--	--	--	0	0	0	--	0	0	0	0	0		
	17... JUL	<3	4	<10	<600	<600	24	8	8	4	4	4	4	3	0	0	0	0	0		
	24... JUL	<3	11	<10	<400	2400	12	4	--	--	<10	10	0	0	0	0	0	0	0		
	21... AUG	<3	17	<10	3100	--	<10	8	0	0	<10	10	0	0	0	0	0	0	0		
	14... SEP	<3	12	<10	1400	1400	12	7	6	1	1	10	3	0	0	0	0	0	0		
	15... SEP	<3	14	<10	810	760	48	8	--	--	<10	10	0	0	0	0	0	0	0		

## 1247200 - CASH CR NK BEVERLY, WASH.

## WATER QUALITY DATA

		MANGANESE*, SUSPENDED	MANGANESE*, TOTAL	MERCURY SUSPENDED	MERCURY RECOVERABLE	MOLYBDENUM, SOLVED (UG/L AS Mn)	NICKEL, TOTAL
LITHIUM DIS-SOLVED (UG/L AS Li)	APR 1980	APR 1980	APR 1980	APR 1980	APR 1980	APR 1980	NICKEL, SUSPENDED
14... MAY	--	--	--	.3	--	--	--
15... --	--	--	--	.4	--	--	--
29... JUN	4	60	4	.1	.0	<10	7
06... 06	10	110	5	.3	.1	<10	4
10... 04	110	100	11	.2	.0	13	0
10... --	--	--	--	.1	--	--	--
17... 6	40	80	12	.0	.0	<10	26
24... 7	120	110	6	.1	.0	<10	6
JUL							6
21... 13	140	140	3	.1	.0	<10	8
AUG							2
19... 7	70	70	3	.7	.0	11	3
SEP							1
15... 12	50	40	9	.2	.1	<10	8

		SELENIUM, SUSPENDED	SELENIUM, TOTAL	SILVER, SUSPENDED	SILVER, RECOVERABLE	STRONTIUM, SOLVED (UG/L AS Ag)	ZINC, TOTAL
DATE	APR 1980	APR 1980	APR 1980	APR 1980	APR 1980	APR 1980	ZINC, SUSPENDED
14... MAY	--	--	1	--	0	--	--
12... --	--	--	1	--	0	--	--
29... JUN	1	0	1	0	0	320	13
06... 06	1	0	1	0	0	290	11
10... 1	1	0	0	0	0	290	14
16... --	--	--	1	--	0	--	--
17... 1	0	1	0	0	0	300	16
24... 1	0	1	0	0	0	300	15
JUL							20
21... 0	0	1	0	0	0	300	19
AUG							50
19... 1	0	1	1	1	0	340	16
SEP							10
15... 1	0	1	0	0	0	370	15

		MERCURY SUSPENDED	MERCURY TOTAL	MOLYBDENUM, DIS-SOLVED (UG/L AS Ni)	NICKEL, SUSPENDED	NICKEL, TOTAL
DATE	APR 1980	APR 1980	APR 1980	APR 1980	APR 1980	APR 1980
14... MAY	--	--	--	--	--	--
15... --	--	--	--	--	--	--
29... JUN	1	0	1	0	0	20
06... 06	1	0	1	0	0	10
10... 1	1	0	0	0	40	8
16... --	--	--	1	--	30	<3
17... 1	0	1	0	0	60	<3
24... 1	0	1	0	0	20	<3
JUL						<3
21... 0	0	1	0	0	50	<3
AUG						<3
19... 1	0	1	1	1	10	<3
SEP						<3
15... 1	0	1	0	0	30	<3

## 12500450 - YAKIMA R ABV AH TANUM CR AT UNION GAP, WASH.

## WATER QUALITY DATA

SPECIFIC CONDUCTANCE (MICRO-MHOS)	TIME	DATE	TEMPERATURE, FIELD WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISOLVED (MG/L)	COLIFORM, TOTAL, FECAL, KF AGAR (COLS./100 ML)	STREPTOCOCCI, FECAL, KF AGAR (COLS./100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)	ACIDITY (MG/L AS CACO3)
			(UNITS)	(DEG C)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)
APR 24... 1980	1300	90	7.8	11.0	22	10.8	120	16	31
MAY 15... 1045	93	7.8	10.1	5.6	11.1	14.0	340	35	--
19... 1515	113	6.8	11.7	100	10.2	--	--	41	9.0
20... 0930	95	6.8	10.8	35	10.2	--	--	37	11
22... 1215	89	6.8	11.5	14	11.1	--	--	31	9.9
23... 0830	97	7.2	8.8	13	10.8	--	--	33	8.1
27... 1600	110	8.0	11.0	7.5	11.2	2800	930	43	9.9
JUN 04... 0945	106	8.3	10.4	2.0	10.7	100	44	39	10
13... 1029	103	7.6	11.6	3.6	--	500	57	37	9.5
20... 1310	100	--	15.8	11	10.0	7100	1100	37	--
26... 1100	112	7.7	12.6	16	10.3	68000	--	40	9.9
JUL 22... 1445	100	--	19.9	5.9	9.4	22000	1000	38	--
AUG 21... 1400	122	8.4	18.6	7.0	10.4	98	38	41	10
SEP 16...	1045	132	--	16.4	2.6	9.8	220	33	.0
								51	12

## 12500450 - YAKIMA R ABV AHTANUM CR AT UNION GAP, WASH.

## WATER QUALITY DATA

MAGNE- SIUM, DIS- SOLVED (MG/L)	SODIUM, DIS- SOLVED (MG/L)	POTAS- SIUM, DIS- SOLVED (MG/L)	ALKA- LINITY AS CACO <sub>3</sub> )	CARBON DIOXIDE (MG/L)	SULFATE DIS- SOLVED (MG/L)	CHLO- RIDE, DIS- SOLVED (MG/L)	FLUO- RIDE, DIS- SOLVED (MG/L)	SILICA, DEG. C (MG/L)	SOLIDS, AT 180 DIS- SOLVED (MG/L)	
DATE	AS MG	AS NA	AS K	AS CO <sub>2</sub> )	AS SO <sub>4</sub> )	AS CL)	AS F)	AS SI02)		
<b>APR , 1980</b>										
24...	2.8	3.4	.8	32	.8	1.5	1.6	.1	16	52
<b>MAY</b>										
15...	3.1	4.4	.9	34	.8	10	2.1	.1	17	64
19...	3.4	4.9	1.1	33	8.3	7.2	3.1	.1	15	67
20...	3.2	4.5	.9	37	9.3	5.4	2.4	.1	15	64
22...	2.8	4.0	.9	31	7.8	--	2.8	.1	14	62
23...	2.9	4.1	.8	34	3.4	5.0	3.3	.1	14	68
27...	3.8	5.2	1.1	41	.6	3.1	3.0	.2	16	72
<b>JUN</b>										
04...	3.4	4.8	1.0	40	.3	2.5	2.1	.9	15	69
13...	3.3	4.8	1.0	41	1.6	5.9	4.8	.1	14	70
20...	3.3	4.7	1.0	35	--	6.6	2.7	.3	15	68
26...	3.8	4.7	1.1	42	1.3	19	1.5	.0	15	64
<b>JUL</b>										
22...	3.5	4.9	1.1	46	--	3.5	2.9	.1	14	71
<b>AUG</b>										
21...	4.1	5.3	1.1	34	.2	11	3.4	.1	14	69
<b>SEP</b>										
16...	5.1	6.6	1.7	49	--	6.3	4.0	.1	17	83

SOLIDS, SUM OF CONSTIT- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (AC-FT)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL PER (MG/L)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (MG/L)	NITRO- GEN, AMMONIA TOTAL (MG/L)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L)	NITRO- GEN, ORGANIC TOTAL (MG/L)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L)	NITRO- GEN, AM- MONIA + ORG. SUSP. TOTAL (MG/L)	NITRO- GEN,NH <sub>4</sub> TOTAL (MG/L)	
DATE	(MG/L)	AS N)	AS N)	AS N)	AS N)	AS N)	AS N)	AS N)	AS N)	
<b>APR , 1980</b>										
24...	53	.07	.09	.12	.120	.130	.57	.30	.69	.26
<b>MAY</b>										
15...	67	.08	.15	--	.060	.120	.32	.29	.38	.00
19...	65	.09	.18	.18	.070	.070	.46	.31	.53	.15
20...	63	.08	.23	.03	.120	.060	1.9	1.5	2.1	.50
22...	--	.08	.12	.10	.000	.120	.46	.36	.46	.00
23...	59	.09	.08	.09	.020	.150	.60	.24	.62	.23
27...	68	.09	.21	.19	.090	.120	.33	.26	.42	.04
<b>JUN</b>										
04...	63	.09	.14	.13	.010	.000	.40	--	.41	--
13...	68	.09	.14	.14	.000	.040	.61	.14	.61	.43
20...	64	.09	.13	.19	.280	.130	.13	.32	.41	.00
26...	80	.08	.18	--	.050	.080	.52	.34	.57	.15
<b>JUL</b>										
22...	67	.09	.17	.15	.070	.040	.65	.35	.72	.33
<b>AUG</b>										
21...	69	.09	.12	.11	.030	.040	.55	.37	.58	.17
<b>SEP</b>										
16...	82	.11	.18	.16	.040	.030	.45	.38	.49	.08

## 12500450 - YAKIMA R ABV AHTANUM CR AT UNION GAP, WASH.

## WATER QUALITY DATA

DATE	NITRO-GEN+AM-MONIA + ORGANIC DIS.		NITRO-GEN, TOTAL (MG/L)		PHOS-PHORUS, SOLVED (MG/L)		PHOS-PHORUS, TOTAL (MG/L)		PHOS-PHORUS, ORTHOPH OSPHATE TOTAL (MG/L)		CARBON, CARBON, ORGANIC DIS-SOLVED (MG/L)		CARBON, CARBON, ORGANIC SUS-PENDED (MG/L)	
	AS N)	AS N)	AS N)	AS P)	AS N)	AS P)	AS P)	AS P)	AS P)	AS C)	AS C)	AS C)	AS C)	AS C)
APR , 1980														
24...	.43	.78	.55	.130	.030	--	--	--	--	3.5	1.2			
MAY														
15...	.41	.53	--	.070	.050	--	--	--	2.5	--	--			
19...	.38	.71	.56	.160	.040	--	--	--	--	--	--			
20...	1.6	2.3	1.6	.130	.050	--	--	--	--	--	--			
22...	.48	.58	.58	.090	.190	--	--	--	--	--	--			
23...	.39	.70	.48	.070	.150	--	--	--	--	--	--			
27...	.38	.63	.57	.080	.040	--	--	--	--	--	--			
JUN														
04...	--	.55	--	.040	.020	--	--	--	--	--	--			
13...	.18	.75	.32	.050	.040	--	--	--	--	2.9	--			
20...	.45	.54	.64	.050	.040	--	--	--	--	--	--			
26...	.42	.75	--	.090	.080	--	--	--	--	--	--			
JUL														
22...	.39	.89	.54	.110	.060	--	.080	--	--	2.4	.4			
AUG														
21...	.41	.70	.52	.080	.070	.030	.030	.030	3.8	--	--			
SEP														
16...	.41	.67	.57	.090	.070	.060	.050	.050	1.7	--	--			

WATER QUALITY DATA

DATE	BERYL-LIUM, UG/L AS BE)	Boron, SUSPENDED	BORON, TOTAL DIS-SOLVED (UG/L AS B)	CADMIUM TOTAL DIS-SOLVED (UG/L AS CD)	CHROMIUM, TOTAL SUS-PENDED RECOVERABLE (UG/L AS CR)	CHROMIUM, TOTAL SUS-PENDED RECOVERABLE (UG/L AS CR)	COBALT, TOTAL DIS-SOLVED (UG/L AS CO)	
APR 24... 1980	--	--	--	0 <1	20	20	0	2 <3
MAY 19...	--	10	0	<1	0	0	0	<3
20...	--	9	0	<1	0	0	0	<3
22...	<1	9	5	1	<1	0	0	<3
23...	<1	20	10	1	<1	0	0	<3
24...	<1	20	0	0	<1	0	0	<3
25...	<1	20	30	0	<1	0	0	<3
JUN 04...	<1	20	0	<1	0	0	0	<3
13...	<1	40	20	0	<1	0	0	<3
20...	<1	00	30	1	<1	0	0	<3
21...	<1	40	0	0	<1	0	0	3
22...	--	40	40	0	<1	0	0	4 <3
23...	--	70	0	70	0	<1	10	0
24...	--	50	30	20	1	<1	0	0
25...	--	16...	2...	2...	2...	2...	0	0

## WATER QUALITY DATA

DATE	COPPER, SUS- PENDED TOTAL	COPPER, DIS- RECOV- ERABLE (UG/L AS CU)	IRON, SUS- PENDED TOTAL	IRON, DIS- RECOV- ERABLE (UG/L AS FE)	LEAD, SUS- PENDED TOTAL	LEAD, DIS- RECOV- ERABLE (UG/L AS FE)	LITHIUM, SUS- PENDED TOTAL	LITHIUM, DIS- RECOV- ERABLE (UG/L AS LI)
APR ' 1980	10	7	3	5900	100	4	2	--
MAY	12	9	3	3200	30	3	0	--
19....	13	10	3	1800	40	0	0	--
20....	6	--	<10	1100	65	2	--	0
22....	8	--	<10	1000	90	0	<10	--
23....	26	6	18	710	670	40	0	--
JUN	7	--	<10	520	22	15	--	--
04....	5	--	<10	950	41	0	0	--
13....	5	--	<10	1300	39	2	1	--
20....	6	--	<10	1700	41	3	0	--
26....	17	16	1	1400	1300	60	4	--
JUL	8	6	2	960	930	30	7	--
22....	SFP	9	--	<10	520	470	48	--
16....						5	--	<10
							10	4
DATE	LITHIUM, DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL	MANGA- NESE, DIS- PENDED RECov- ERABLE (UG/L AS MN)	MERCURY, SUS- PENDED RECov- ERABLE (UG/L AS HG)	MERCURY, TOTAL, DIS- PENDED RECov- ERABLE (UG/L AS HG)	MERCURY, DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, SUS- PENDED RECov- ERABLE (UG/L AS NI)
APR ' 1980	--	470	430	40	.1	.0	--	18
MAY	<4	70	50	20	.1	.1	--	5
19....	<4	40	30	6	.6	.0	--	3
20....	<4	40	30	6	.0	.0	<10	1
22....	<4	40	30	8	.0	.0	<10	3
23....	<4	20	7	13	.2	.0	<10	2
27....	<4	30	20	12	.2	.0	<10	4
JUN	04....	30	30	13	.1	.0	<10	4
13....	<4	40	30	13	.1	.0	<10	3
20....	<4	50	40	15	.3	.0	<10	2
26....	<4	70	60	12	.5	.1	<10	0
JUL	22....	40	30	10	.2	.1	--	6
AUG	<4	30	20	10	.4	.2	--	3
21....	SEP	20	7	13	.5	.1	<10	0
16....	6						6	6

## 12500450 - YAKIMA R ABV AHTANUM CR AT UNION GAP, WASH.

## WATER QUALITY DATA

DATE	SELE- NIUM, SUS- PENDED NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED NIUM, TOTAL (UG/L AS SE)	SILVER, SILVER, TOTAL DISSOLVED (UG/L AS AG)	SILVER, SILVER, TOTAL DISSOLVED (UG/L AS AG)	STRON- TIUM, DISSOLVED (UG/L AS SR)	VANA- DIUM, DISSOLVED (UG/L AS V)	ZINC, TOTAL DISSOLVED (UG/L AS ZN)	ZINC, PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
			SILVER, SILVER, TOTAL DISSOLVED (UG/L AS AG)	SILVER, SILVER, TOTAL DISSOLVED (UG/L AS AG)	SILVER, SILVER, TOTAL DISSOLVED (UG/L AS SR)	STRON- TIUM, DISSOLVED (UG/L AS V)	ZINC, TOTAL DISSOLVED (UG/L AS ZN)	ZINC, PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
APR * 1980									
24***	0	0	0	0	0	--	--	--	<3
MAY									
19***	0	0	0	0	0	--	--	20	<3
20***	0	0	0	0	0	--	--	30	<3
22***	0	0	0	0	0	37	<6.0	30	<3
23***	0	0	0	0	0	38	<6.0	30	<3
27***	0	0	0	0	0	49	<6.0	40	9
JUN									
04***	0	0	0	0	0	46	<6.0	30	3
13***	0	0	0	0	0	45	<6.0	30	<3
20***	0	0	0	0	0	45	<6.0	40	10
26***	0	0	0	1	1	49	<6.0	30	<3
JUL									
22***	0	0	0	0	0	--	--	30	<3
AUG									
21***	0	0	0	0	0	--	--	10	7
Sep									
16***	0	0	0	0	0	64	6.0	20	4

## 125005-00 - NORTH FORK AHATANUM CREEK NEAR TAMPICO, WASH.

## WATER QUALITY DATA

DATE	TIME	SPÉ- CIFIC CON- DUCT- ANCE (MICRO- MHOES)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN- DIS- SOLVED (MG/L)	HARD- NESS AS CACO <sub>3</sub> )	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS Na)
MAR 29, 1980	1200	86	7.4	4.4	4.9	11.2	34	4.9	8.0	3.5
30....	1515	86	7.4	6.5	4.9	10.8	35	4.9	8.1	3.6
MAY 18....	1930	141	6.4	6.6	340	9.6	44	4.9	12	3.5
19....	1740	80	6.7	7.6	45	11.4	28	0	7.1	3.7
22....	1530	73	6.6	7.9	18	10.7	27	0	6.5	2.7
28....	0930	71	7.5	5.8	8.9	11.5	26	9.9	6.6	2.4
JUN 03....	1615	73	8.0	7.8	5.0	10.3	24	9.9	6.0	2.3
10....	1520	60	7.8	10.4	5.1	10.0	24	---	5.9	2.3
18....	0950	58	7.7	8.0	9.8	10.7	22	---	5.5	2.1
24....	1525	68	7.5	8.8	6.0	---	23	---	5.5	2.3
JUL 24....	1015	80	7.1	12.0	2.4	9.4	30	---	7.0	3.1
AUG 19....	1015	64	7.7	9.6	5.2	9.9	30	9.9	7.2	3.1
SEP 15....	1630	88	--	14.0	8.4	9.2	35	0	8.4	3.6
MAR 29....	1980	39	2.4	.8	.1	40	85	83	.11	.03
30....	40	2.5	1.0	.7	.1	40	94	84	.12	.08
MAY 18....	21	13	25	11	.2	29	109	104	.14	.05
19....	23	7.2	7.4	3.2	.1	31	70	71	.09	.10
22....	24	9.5	7.5	3.7	.1	28	69	68	.09	.00
28....	26	1.3	3.6	3.2	.1	32	72	68	.09	.06
JUN 03....	26	.4	7.4	1.8	.0	30	69	67	.09	.01
10....	25	.6	1.5	1.9	.1	28	57	59	.07	.00
18....	26	.8	.7	1.5	.3	27	61	57	.08	.01
24....	29	1.4	4.6	.9	.1	29	59	64	.08	.03
JUL 24....	39	4.9	3.1	.9	.1	34	80	77	.10	.00
AUG 19....	33	1.0	8.6	3.1	.1	34	75	82	.10	.00
SEP 15....	41	--	4.1	2.7	.1	35	96	85	.13	.00

## 12500500 - NORTH FORK AHANUM CREEK NEAR TAMPICO, WASH.

## WATER QUALITY DATA

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS- TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS- SOLVED TOTAL (MG/L AS N)	NITRO-GEN, NH4 MONIA + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, AM- MONIA + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS. TOTAL (MG/L AS N)	NITRO-GEN, MONIA + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, DIS- SOLVED TOTAL (MG/L AS N)	NITRO-GEN, DIS- SOLVED TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	
MAR 29...•	•010	•010	•010	•34	•31	•35	•03	•32	•38	•34	•060
MAY 30...•	•010	•010	•010	•1.1	•45	1.2	.74	.46	1.2	.54	•060
JUN 18...•	•080	•080	2.6	2.7	•00	2.8	2.7	2.8	•720	•040	
19...•	•150	•130	1.6	1.6	•20	1.6	1.9	1.7	•150	•040	
22...•	•060	•060	•33	•37	•00	•43	•39	•45	•080	•190	
28...•	•010	•020	•47	•24	•44	•22	•26	•54	•30	•060	•030
JUN 03...•	•010	•040	•34	--	•32	1.0	•66	•34	--	•040	•030
10...•	•000	•020	1.0	•24	•30	•02	•28	•31	•34	•050	•010
18...•	•020	•040	•28	•24	•25	•28	•00	•28	•31	•31	•030
24...•	•040	•030	•24	•25	•25	•28	•00	•28	•30	•050	•060
JUL 24...•	•000	•000	•50	•29	•50	•21	•29	•50	•29	•060	•050
AUG 19...•	•000	•000	•42	•42	•42	•16	•26	•42	•26	•060	•060
SEP 15...•	•020	•000	•62	•25	•64	•39	•25	•64	•25	•080	•050
MAR 29...•	580	460	140	--	--	--	0	0	2	0	0
MAY 30...•	470	330	140	--	--	--	1	0	2	0	0
JUN 18...•	16000	16000	50	--	--	--	4	2	2	100	80
19...•	2200	2100	110	--	--	--	2	1	1	100	80
22...•	450	370	50	0	0	0	0	0	0	0	5
28...•	400	350	50	0	0	0	2	1	1	0	10
JUN 03...•	370	320	50	0	0	0	1	0	1	0	10
10...•	570	510	60	0	0	0	1	0	1	0	10
18...•	410	380	30	--	--	--	1	0	1	0	10
24...•	860	840	20	--	--	--	1	0	1	0	10
JUL 24...•	220	210	10	--	--	--	2	0	2	0	20
AUG 19...•	380	340	40	--	--	--	1	0	1	0	20
SEP 15...•	370	350	20	--	--	--	1	0	1	100	90

## 12500500 - NORTH FORK AHANTUM CREEK NEAR TAMPICO, WASH.

WATER QUALITY DATA										
DATE	Boron, SUSPENDED RECVRABLE (UG/L AS BE)	Boron, TOTAL DIS-SOLVED (UG/L AS B)	CADMIUM		CADMIUM		CHROMIUM, SUS-PENDED RECVRABLE (UG/L AS CD)		CHROMIUM, SUS-PENDED RECVRABLE (UG/L AS CR)	
			SUS-PENDED	TOTAL	DIS-SOLVED	SOLVED	TOTAL	SOLVED	RECVRABLE (UG/L AS CD)	RECVRABLE (UG/L AS CR)
MAY , 1980										
29...	--	60	50	9	0	0	<1	0	0	0
30...	--	60	50	10	0	0	<1	20	20	0
MAY	--	20	0	20	0	--	<1	0	0	0
18...	--	7	0	8	0	0	1	0	0	0
19...	--	10	6	4	1	0	1	0	0	0
22...	<1	10	0	20	0	--	<1	0	0	0
28...	<1	10	0	20	0	--	<1	0	0	0
JUN										
03...	<1	10	6	4	0	--	<1	0	0	0
10...	<1	30	10	20	0	--	<1	0	0	0
18...	<1	40	10	30	0	--	<1	0	0	0
24...	<1	30	0	30	0	--	<1	0	0	0
JUL										
24...	<1	20	20	0	0	--	<1	0	0	0
AUG										
19...	<1	40	0	60	0	0	1	10	10	0
SEP										
15...	<1	80	60	20	0	--	<1	10	10	0
COPPER, SUSPENDED RECVRABLE (UG/L AS CU)										
COBALT, TOTAL DIS-SOLVED (UG/L AS CO)										
MAY , 1980										
29...	<3	5	1	4	610	370	>40	0	0	0
30...	<3	2	0	4	600	430	170	2	2	0
MAY	<3	90	83	7	17000	17000	50	7	6	1
18...	<3	19	16	3	4600	4500	60	4	4	0
19...	<3	8	--	<10	2300	2200	62	2	2	0
22...	<3	8	--	<10	920	840	85	12	--	<10
26...	<3	5	--	<10	1000	960	40	3	--	<10
JUN										
03...	<3	5	--	<10	830	750	84	7	0	13
10...	<3	5	--	<10	1100	1000	52	0	--	0
18...	<3	4	--	<10	870	810	62	1	0	0
24...	<3	8	--	<10	690	570	120	8	0	<10
JUL										
24...	<3	36	--	<10	500	380	120	5	0	<10
AUG										
19...	<3	7	--	<10	980	830	150	2	--	<10
SEP										
15...	<3	6	--	<10						

## 12500500 - NORTH FORK AHANTUM CREEK NEAR TAMPICO, WASH.

## WATER QUALITY DATA

DATE	MANGANESE			MERCURY			MOLYBDENUM			NICKEL		
	TOTAL DIS- SOLVED (UG/L AS LI)	SUS- PENDED RECOV- ERABLE (UG/L AS MN)	MANGANESE, DIS- SOLVED (UG/L AS MN)	TOTAL DIS- SOLVED (UG/L AS HG)	SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DENUM., DIS- SOLVED (UG/L AS HG)	TOTAL DIS- SOLVED (UG/L AS MO)	RECOV- ERABLE (UG/L AS NI)	TOTAL DIS- SOLVED (UG/L AS NI)	RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	
MAR 1980												
29...	<4	20	10	6	1.3	.1	.0	--	0	0	2	
30...	<4	20	10	7	.1	.0	.0	--	0	0	2	
MAY	7	360	290	70	.3	.0	.0	--	15	14	1	
18...	<4	80	70	10	.2	.0	.0	--	9	8	1	
19...	<4	50	50	5	.1	.0	.0	<10	8	0	8	
22...	<4	20	10	8	.2	.0	.3	<10	11	9	2	
JUN												
03...	<4	30	20	14	.1	.0	.2	<10	6	4	2	
10...	<4	20	10	10	.3	.0	.5	<10	0	0	7	
18...	<4	50	40	10	.0	.0	.0	<10	4	3	1	
24...	<4	30	20	7	.4	.2	.2	<10	7	7	0	
JUL												
24...	<4	30	10	19	.2	.0	.2	<10	4	2	2	
AUG												
19...	<4	20	4	16	.4	.2	.2	<10	7	5	2	
SEP												
15...	<4	30	20	15	.1	.0	.5	<10	1	1	0	
DATE	SELENIUM			SILVER			STRONTIUM			ZINC		
	SELENIUM, TOTAL (UG/L AS SE)	SUS- PENDED TOTAL (UG/L AS SE)	DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL (UG/L AS AG)	SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, TOTAL (UG/L AS SR)	DIS- SOLVED (UG/L AS V)	VANADIUM, TOTAL (UG/L AS ZN)	PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	
MAR 1980												
29...	0	0	0	0	0	0	0	0	--	--	20	7
30...	0	0	0	0	0	0	0	0	--	--	10	5
MAY												
1H...	1	1	0	0	0	0	0	0	--	--	80	<3
19...	0	0	0	0	0	0	0	0	--	--	30	10
22...	0	0	0	0	1	1	0	31	<6.0	30	20	6
28...	0	0	0	0	0	0	0	29	<6.0	30	20	11
JUN												
03...	0	0	0	0	0	0	0	27	<6.0	10	--	<3
10...	0	0	0	0	0	0	0	28	<6.0	20	--	<3
18...	0	0	0	0	0	0	0	27	<6.0	20	--	<3
24...	0	0	0	0	0	0	0	27	<6.0	10	--	<3
JUL												
24...	0	0	0	0	0	0	0	32	8.0	80	80	4
AUG												
19...	0	0	0	1	1	0	0	34	<6.0	90	90	4
SEP				0	0	0	0	38	7.0	30	--	<3
15...	0	0	0	0	0	0	0	38	7.0	30	--	<3

## 12501000 - SO FK AHTANUM CR AT CONRAD RANCH N TAMPICO, WASH.

## WATER QUALITY DATA

DATE	TIME	MICRO-	PH	TEMPER-	TUR-	OXYGEN,	HARD-	CALCIUM	MAGNE-	POTAS-
		MHOES)	FIELD UNITS)	ATURE,	BID-ITY,	DIS-	NESS (MG/L AS CACO3)	DIS-	SIUM,	SIUM,
		(MICRO-	(UNITS)	(DEG C)	(NTU)	SOLVED (MG/L)	AS CACO3)	SOLVED (MG/L AS CACO3)	DIS-	DIS-
MAJ , 1980	1430	78	7.4	5.4	4.5	11.2	33	4.9	7.5	3.6
29... .	1620	83	7.3	6.0	5.0	11.1	33	4.9	7.6	3.6
30... .										2.3
MAY	2015	108	6.0	6.6	280	8.7	38	0	9.8	3.3
18... .	1900	79	6.8	7.6	75	10.4	30	0	7.3	5.9
19... .	1615	69	6.5	7.9	12	10.9	24	4.9	5.8	3.7
22... .	1100	68	7.0	6.8	4.5	11.4	25	4.9	6.2	2.4
28... .										1.7
JUN	1050	60	7.6	8.4	4.1	10.8	25	4.9	6.1	2.5
11... .										1.7

DATE	ALKAL- LINITY (MG/L AS CACO3)	CARBON DIOXIDE (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS-SOLVED (MG/L AS CL)	FLUO- RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C	SOLIDS, CONSTI- TUENTS, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
MAJ , 1980										
29... .	38	2.4	1.6	.9	.1	42	89	84	.12	.03
30... .	38	3.0	.9	.5	.1	43	89	84	.12	.02
MAY										
18... .	21	16	1b	7.6	.1	33	94	91	.12	.05
19... .	29	7.3	7.0	2.8	.1	33	75	76	.10	.03
22... .	23	11	3.8	1.8	.1	31	68	63	.09	.00
28... .	30	.7	.3	1.0	.1	34	69	66	.09	.01
JUN										
11... .	25	.9	.5	1.3	.1	31	65	61	.08	.00
										--

## 12501000 - SO FK AHTANUM CR AT CONRAD RANCH N TAMPICO, WASH.

WATER QUALITY DATA									
DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, PHORUS, DIS- SOLVED (MG/L AS P)	NITRO- GEN, AM- MONIA TOTAL (MG/L AS N)
MAR 9 1980	.030	.010	.050	.29	.24	.32	.05	.27	.35
29***	.030	.010	.010	.32	.22	.33	.10	.23	.25
30***	.010								
MAY									
18***	.100		.100	2.7	1.0	2.8	1.7	1.1	2.8
19***	.080	.040	.3.1	1.4	3.2	1.7	1.5	3.2	1.2
22***	.000	--	1.0	--	1.0	--	.32	1.0	1.5
28***	.010	.000	.35	.35	.36	.01	.35	.37	.68
JUN									
11***	.000	.000	.34	.20	.34	.14	.20	.34	.39

WATER QUALITY DATA									
DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV. (UG/L AS AL)	ANTI- MONY, TOTAL SOLVED (UG/L AS SB)	ANTI- MONY, TOTAL SOLVED (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)
MAR 9 1980	440	370	70	--	--	--	1	0	2
29***	510	420	90	--	--	--	1	0	2
30***									
MAY									
18***	500	460	40	--	--	--	4	2	2
19***	1300	1300	50	--	--	--	2	1	1
22***	180	180	0	0	0	0	0	0	0
28***	480	480	0	0	0	0	1	0	0
JUN									
11***	210	170	40	0	0	0	1	0	0

## 12501000 - 50 FK AHTANUM CR AT CONRAD RANCH N TAMPICO, WASH.

## WATER QUALITY DATA

DATE	MAH	1980	BORON, SUS-	HORON, SUS-	CADMIUM, SUS-	CHRO- MUM,	CHRO- MUM,	COBALT, SUS-
			TOTAL PENDED	TOTAL PENDED	TOTAL PENDED	MUM, SUS-	MUM, SUS-	PENDED
18...	18...	--	50	<0	30	0	0	0
19...	19...	--	10	0	10	--	<1	0
20...	20...	--	7	0	10	--	<1	0
21...	21...	--	20	0	0	--	<1	0
22...	22...	--	6	0	20	0	0	0
JUN	11...	<1	30	10	<0	0	--	--
						<1	0	0
						0	0	0
						0	0	0

DATE	MAH	1980	HORON, SUS-	HORON, SUS-	CADMIUM, SUS-	CHRO- MUM,	CHRO- MUM,	COBALT, SUS-
			TOTAL PENDED	TOTAL PENDED	TOTAL PENDED	MUM, SUS-	MUM, SUS-	PENDED
29...	29...	--	80	70	7	0	0	0
30...	30...	--	50	<0	30	0	0	0
MAY	18...	--	10	0	10	--	<1	0
19...	19...	--	7	0	10	--	<1	0
20...	20...	--	20	0	0	--	<1	0
21...	21...	--	6	0	20	0	0	0
JUN	11...	<1	30	10	<0	0	--	--
						<1	0	0
						0	0	0
						0	0	0

DATE	MAH	1980	COPPER, SUS-	COPPER, SUS-	IRON, SUS-	LEAD, SUS-	LEAD, SUS-	LITHIUM SUS-
			TOTAL PENDED	TOTAL PENDED	TOTAL PENDED	MUM, SUS-	MUM, SUS-	PENDED
29...	29...	<3	3	1	2	620	410	210
30...	30...	<3	3	0	3	640	450	190
MAY	18...	<3	3b	33	2	7100	7000	60
19...	19...	<3	10	b	2	1900	1800	70
20...	20...	<3	9	--	<10	840	800	40
JUN	11...	<3	5	--	<10	570	490	84
					<10	470	370	100
						5	5	5
						0	0	0

DATE	MAH	1980	CADMIUM, SUS-	CADMIUM, SUS-	IRON, SUS-	LEAD, SUS-	LEAD, SUS-	LITHIUM SUS-
			TOTAL PENDED	TOTAL PENDED	TOTAL PENDED	MUM, SUS-	MUM, SUS-	PENDED
29...	29...	--	80	70	7	0	0	0
30...	30...	--	50	<0	30	0	0	0
MAY	18...	--	10	0	10	--	<1	0
19...	19...	--	7	0	10	--	<1	0
20...	20...	--	20	0	0	--	<1	0
21...	21...	--	6	0	20	0	0	0
JUN	11...	<1	30	10	<0	0	0	0
					<1	0	0	0
					0	0	0	0

12501000 - SO FK AHNTANUM CR AT CONRAD RANCH N TAMPICO, WASH.

WATER QUALITY DATA

DATE	AS LI)	MANGANESE,			MERCURY			MOLYBDENUM,			NICKEL,			
		LITHIUM TOTAL	SUS- PENDED	DIS- RECOV- ERABLE	MANGANESE, TOTAL	SUS- PENDED	DIS- RECOV- ERABLE	MERCURY TOTAL	SUS- PENDED	DIS- RECOV- ERABLE	MOLYBDENUM, TOTAL	SUS- PENDED	DIS- RECOV- ERABLE	
(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L
MAR 29, 1980	<4	30	10	20	•0	•0	•0	•0	--	--	0	0	0	2
30.***	<4	20	10	10	•1	•1	•0	•0	--	--	1	0	0	2
MAY 18.***	<4	150	110	40	•7	•7	•0	•0	--	--	8	4	4	4
19.***	<4	40	20	20	•1	•1	•0	•0	--	--	6	5	1	4
22.***	<4	40	30	6	•1	•1	•0	•0	<10	7	3	4	3	4
28.***	<4	20	10	10	1.5	1.2	.3	.3	<10	4	1	3	1	3
JUN 11.***	<4	20	2	18	•1	•0	.1	.1	<10	6	4	2	2	2

DATE	SELENIUM,			SILVER,			STRONTIUM,			ZINC,			
	SUS- PENDED	DIS- SOLVED	TOTAL	SUS- PENDED	DIS- SOLVED	TOTAL	SUS- PENDED	DIS- SOLVED	TOTAL	SUS- PENDED	DIS- SOLVED	ZINC,	
(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L
MAR 29, 1980	0	0	0	0	0	0	0	0	--	--	20	20	4
30.***	0	0	0	0	0	0	0	0	--	--	20	20	5
MAY 18.***	0	0	0	0	0	0	0	0	--	--	30	30	3
19.***	0	0	0	0	0	0	0	0	--	--	30	30	<3
22.***	0	0	0	0	0	0	0	0	26	26	20	20	<3
28.***	0	0	0	0	0	0	0	0	<6.0	<6.0	20	20	<3
JUN 11.***	0	0	0	0	0	0	0	0	28	<6.0	10	10	<3

## 12506000 - TOPPENISH CREEK NEAR FORT SIMCOE, WASH.

## WATER QUALITY DATA

SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TIME (MM/DD/HH)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, ODS-SOLVED (MG/L)	HARD-NESS AS CACO3) (MG/L)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)
MAJ , 1980 30... MAY	1000	77	7.4	3.6	2.7	12.4	34	4.9	7.7	3.6
19... 20... 23... 28... JUN	1145 1400 1115 1645	98 89 105 101	6.7 6.8 9.6 8.0	9.8 12.0 9.6 12.4	23 6.0 3.7 2.9	10.6 10.3 10.9 10.1	40 38 40 40	0 0 4.9 4.9	4.6 8.9 4.9 9.3	4.4 4.0 4.1 4.1
03... 12... 18... 25... JUL	1130 1430 1400 1605	98 110 113 117	7.9 7.9 -- 8.0	9.6 13.6 -- 14.2	1.4 1.3 -- 4.3	10.2 9.6 9.3 --	42 42 -- 44	9.9 4.9 -- --	4.4 9.5 -- 10	4.3 4.6 -- 4.6
24... AUG 19... SEP 16... 1980	1400 1440 133 1500	126 8.2 -- 1.32	7.9 8.2 18.6 --	21.1 1.1 1.6 17.2	1.1 2.8 9.4 1.6	8.1 5.2 0 9.3	52 52 0 53	-- -- 12 .0	5.4 5.4 12 12	5.5 5.7 2.4 2.3
ALKALINITY (MG/L AS CACO3)		CARBON DIOXIDE SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CCl)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
MAJ , 1980 30... MAY	39	2.4	1.4	.7	.1	34	78	76	.10	.03
19... 20... 23... 28... JUN	40 41 41 45 03... 12... 18... 25... JUL	12 10 2.0 1.1 4.8 5.7 5.7 5.6 65 65 57 57 Srp 16...	5.8 3.5 1.0 2.0 2.2 1.1 -- 1.4 .8 1.3 5.3 .5 -- 3.8	2.1 1.2 7.3 1.9 2.2 1.9 1.9 1.5 1.8 1.8 1.0 1.0 1.8 1.8	.1 .1 1 .2 .9 .1 -- .1 .2 .1 .2 .1 -- .1	32 32 24 35 35 98 94 82 82 37 103 103 102 108	83 77 78 77 86 87 94 91 109 103 103 102 108	.11 .10 .10 .10 .11 .10 .13 .11 .14 .14 .14 .14 .16	.07 .01 .00 .02 .01 .01 .03 .02 .00 .00 .00 .00 .00	

## 12506000 - TOPPENISH CREEK NEAR FORT SIMCOE, WASH.

## WATER QUALITY DATA

DATE	TIME	NITRO-		NITRO-		NITRO-		NITRO-	
		GEN.	AMMONIA	GEN.	ORGANIC	GEN.	AMMONIA + ORG.	GEN.	PHOS- PHORUS,
MAY 30...	1980	.010	.010	.47	.36	.48	.11	.37	.050
MAY 19...		.100	.080	.90	.43	1.0	.49	.51	.060
MAY 20...		.100	.100	2.4	1.9	2.5	.50	2.0	.070
MAY 23...		.150	--	.80	--	.95	.01	.94	.040
MAY 28...		.030	.020	.32	.35	.35	.00	.37	--
JUN 03...		.030	.020	.64	--	.67	--	.68	.040
JUN 12...		.000	.020	.61	.49	.61	.10	.51	.010
JUN 18...		--	--	--	--	--	--	--	--
JUN 25...		.010	.010	1.6	.75	1.7	.94	.76	.060
JUL 24...		.000	.000	.94	.28	.94	.66	.28	.060
AUG 19...		.000	.010	.36	.38	.36	.00	.39	.070
Sep 16...		.000	.000	.31	.32	.31	.00	.32	.070

DATE	TIME	ALUM-		ALUM-		ANTI-		ARSENIC		BARIUM,	
		INUM,	SUS-	INUM,	SUS-	MONY,	SUS-	PENDED	ARSENIC	TOTAL	SUS-
MAY 30...	1980	280	180	100	--	--	--	--	1	0	2
MAY 19...		570	540	30	--	--	--	1	0	1	0
MAY 20...		460	440	20	--	--	--	1	0	1	0
MAY 23...		110	30	80	0	0	0	3	3	0	6
MAY 28...		160	150	10	0	0	0	6	5	1	20
JUN 03...		150	0	0	0	0	0	0	1	0	10
JUN 12...		200	150	50	0	0	0	0	1	0	10
JUN 17b...		410	400	10	--	--	--	1	0	0	10
JUL 24...		140	130	10	--	--	--	2	0	0	20
AUG 19...		260	250	10	--	--	--	0	1	0	20
SEP 16...		110	90	20	--	--	--	0	1	0	10

## 12506000 - TOPPENISH CREEK NEAR FORT SIMCOE, WASH.

WATER QUALITY DATA												
DATE	BORON, TOTAL DIS- SOLVED (UG/L AS BE)	BORON, SUS- PENDED RECOV- ERABLE (UG/L AS B)	CADMIUM			CHRO- MIUM, TOTAL DIS- RECOV- ERABLE (UG/L AS CD)			CHRO- MIUM, PENDED RECOV. SOLVED (UG/L AS CR)	COBALT, TOTAL, DIS- RECOV- ERABLE (UG/L AS CO)		
			CADMIUM TOTAL DIS- RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- RECOV- ERABLE (UG/L AS CD)	CADMIUM SOLVED (UG/L AS CD)	CHRO- MIUM, PENDED RECOV. SOLVED (UG/L AS CR)					
MAR 30... 1980	--	70	70	2	0	0	<1	20	20	0	1	0
MAY 19... 1980	--	9	1	8	0	--	<1	0	0	0	0	--
20... 23... 28... 03... 12... 25... 24... 19... 26... 16... JUN	7 10 20 10 40 30 30 40 30 30	0 0 0 0 30 0 0 0 0 0	8 10 20 0 10 30 30 50 20 20	0 1 0 0 0 0 0 0 0 0	1 0 0 0 0 0 0 0 0 0	-- 2 -- <1 <1 <1 <1 <1 <1 <1	0 2 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	
JUL AUG SEP	30 40 30	0 0 0	30 50 9	0 0 0	-- -- --	<1 <1 <1 <1 <1	0 0 0 0 0	0 0 0 0 0	10 10 10	2 0 0	0 0 0	
1980	<3	3	0	3	340	210	130	0	0	0	0	0
COPPER, TOTAL DIS- SOLVED (UG/L AS CO)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, TOTAL DIS- SOLVED (UG/L AS CU)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, TOTAL DIS- SOLVED (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, TOTAL DIS- SOLVED (UG/L AS FE)	IRON, PENDED RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL DIS- SOLVED (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS LI)	LITHIUM TOTAL DIS- SOLVED (UG/L AS LI)		
MAY 19... 20... 23... 26... 03... 12... 25... JUL	<3 5 19 5 5 3 4	7 3 3 16 10 10 67	1 2 16 10 630 440 870 610 520 440 190 740	1400 730 520 440 190 740 1300 140 93 4 7 1000	110 140 93 4 4 0 0 0 0 0 0 0	3 2 4 4 4 7 0 1 0 0 0 0	0 1 0 0 0 0 0 0 0 0 0 0	0 1 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	
AUG 19... SEP 16... 1980	3 <3 3 4	67 10 10	-- <10 <10 <10	750 890 400	480 490 5	9 0 0	<10 <10 <10	2 0 0	0 0 0	0 0 0	0 0 0	
				1000	470	530		2	<10	10	5	

12506000 - TOPPENISH CREEK NEAR FORT SIMCOE, WASH.

WATER QUALITY DATA

	MANGANESE	MANGANESE	MERCURY	MERCURY	MERCURY	MOLYBDENUM	MOLYBDENUM	NICKEL
LITHIUM	SUSPENDED	TOTAL	SUSPENDED	TOTAL	RECOVERED	SOLVED	SOLVED	SUSPENDED
DIAFF.	AS LI)	AS MN)	AS MN)	AS MN)	AS HG)	(UG/L	(UG/L	AS NI)
MANGANESE,	RECOVERED	SOLVED	RECOVERED	RECOVERED	SOLVED	(UG/L	(UG/L	NICKEL,
LITHIUM	SOLVED	(UG/L	SOLVED	SOLVED	SOLVED	(UG/L	(UG/L	NICKEL,
DIAFF.	AS LI)	AS MN)	AS MN)	AS MN)	AS HG)	AS HG)	AS HG)	AS NI)

DATE	TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED	SELE- NIUM, DIS- SOLVED TOTAL (UG/L AS SE)	SILVER, SUS- PENDED	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, SUS- PENDED	ZINC, DIS- SOLVED (UG/L AS ZN)
									ZINC, RECOV- ERABLE (UG/L AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
MAR 30... 1980	0	0	0	0	0	0	0	--	10	4
MAY 19...**	0	0	0	0	0	0	0	--	10	--
20...**	0	0	0	0	0	0	0	--	10	--
23...**	0	0	0	0	1	1	0	48	30	4
28...**	0	0	0	0	0	0	0	49	<6.0	20
JUN 03...**	0	0	0	0	0	0	0	51	<6.0	30
12...**	0	0	0	0	0	0	0	56	<6.0	10
JUL 25...**	0	0	0	0	0	0	0	57	<6.0	--
24...**	0	0	0	0	0	0	0	63	10	40
AUG 19...**	0	0	0	0	0	0	0	66	<6.0	10
SEP 16...**	0	0	0	0	0	0	0	67	<6.0	20

## 12506300 - N.F. SIMCOE CR NR FORT SIMCOE

## WATER QUALITY DATA

DATE	TIME	MICRO- MHOES	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN- DIS- SOLVED (MG/L)	HARD- NESS (MG/L) AS CACO3)	ACIDITY (MG/L) AS CACO3)	CALCIUM DIS- SOLVED (MG/L) AS CACO3)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS Mg)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K)
MAR 30... 1980	1300	100	7.6	5.4	3.1	11.6	42	4.9	9.4	4.5	4.6
MAY 19... 0930	140	6.9	9.3	4.5	9.8	55	0.0	1.3	5.5	6.6	3.3
20... 1145	122	6.8	11.6	1.0	10.6	48	0.0	1.1	5.2	5.9	3.2
23... 1300	118	7.4	10.8	7.3	9.9	45	0.0	1.0	4.9	5.9	3.0
28... 1430	140	6.0	13.5	5.4	9.9	48	9.9	1.1	5.2	5.8	3.2
JUN 12... 1050	138	6.0	11.8	5.1	10.2	50	4.9	11	5.6	6.3	3.4

DATE	ALKALINITY (MG/L) AS CACO3)	CARBO- ONIC DIS- SOLVED (MG/L) AS CO2)	SULFATE DIS- SOLVED (MG/L) AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L) AS Cl)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F)	SILICA, DIS- SOLVED (MG/L) AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N)	
MAR 30... 1980	49	1.9	1.1	.7	.1	44	103	96	.14	.02	.01
MAY 19... 60	12	1.5	4.2	.1	.2	114	113	.15	.07	.06	
20... 48	12	5.4	2.4	.1	.43	107	105	.14	.04	.05	
23... 47	2.9	3.7	5.3	.1	.35	106	96	.14	.00	.00	
28... 58	.9	.9	1.6	.0	.44	109	107	.14	.10	.03	
JUN 12... 67	1.0	.8	.8	.1	.45	104	113	.14	.01	--	

## 12506300 - N.F. SIMCOE CR NR FORT SIMCOE

## WATER QUALITY DATA

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO-GEN, MONIA + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, MONIA + ORG. TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS P)				
MAY 19....	.100	.130	2.9	.45	3.0	.4	.58	3.0	.64	1.6	.130	.060
20....	.100	.120	1.9	1.3	2.0	.50	1.5	2.0	.36	.36	.090	.060
23....	.070	.090	.37	.27	.44	.08	.36	.44	.38	.29	.060	--
28....	.010	.040	.27	.22	.28	.02	.26	.38	.29	.070	.040	
JUN 12....	.000	.000	.40	.27	.40	.13	.27	.41	--	.070	.010	

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV. (UG/L AS AL)	ANTI- MONY, TOTAL SOLVED (UG/L AS SB)	ANTI- MONY, TOTAL (UG/L AS SB)	ANTI- MONY, TOTAL (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	
MAY 19....	1500	1400	80	--	--	--	--	2	0	2	0	0	20
20....	830	770	60	--	--	--	--	1	0	1	0	0	20
23....	130	10	120	0	0	0	0	0	0	0	0	0	8
28....	560	>20	40	0	0	0	0	6	5	1	0	0	20
JUN 12....	210	180	30	0	0	0	0	1	0	1	0	0	20

## 12506300 - N.F. SIMCOE CR NR FORT SIMCOE

## WATER QUALITY DATA

DATE	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	Boron, SUS-PENDED TOTAL RECOV-ERABLE (UG/L AS B)	Boron, DIS-SOLVED (UG/L AS B)	CADMIUM			CADMIUM			CHRO-MIUM, SUS-PENDED			CHRO-MIUM, SUS-PENDED			COBALT, SUS-PENDED		
				TOTAL	SOLVED	RECOV-ERABLE (UG/L AS CD)	TOTAL	SOLVED	RECOV-ERABLE (UG/L AS CD)	TOTAL	SOLVED	RECOV-ERABLE (UG/L AS CR)	TOTAL	SOLVED	RECOV-ERABLE (UG/L AS CR)	TOTAL	SOLVED	RECOV-ERABLE (UG/L AS CO)
MAR 30...	--	60	40	20	0	0	<1	20	20	20	0	0	1	0	0	0	0	0
MAY 19...	--	10	0	10	0	0	--	<1	0	20	20	0	0	0	0	0	0	0
20...	2	0	10	0	0	0	--	<1	0	0	0	0	0	0	0	0	0	0
23...	<1	10	6	4	1	1	--	<1	0	0	0	0	0	0	0	0	0	0
28...	<1	10	0	10	0	0	--	<1	0	0	0	0	0	0	0	0	0	0
JUN 12...	<1	40	20	20	0	0	--	<1	0	0	0	0	0	0	0	0	0	0

DATE	COBALT, DIS-SOLVED (UG/L AS CO)	Copper, SUS-PENDED TOTAL RECOV-ERABLE (UG/L AS CU)	Copper, DIS-SOLVED (UG/L AS CU)	IRON, SUS-PENDED			IRON, SUS-PENDED			IRON, SUS-PENDED			LEAD, SUS-PENDED			LEAD, SUS-PENDED			LITHIUM SUS-PENDED		
				TOTAL	SOLVED	RECOV-ERABLE (UG/L AS FE)	TOTAL	SOLVED	RECOV-ERABLE (UG/L AS FE)	TOTAL	SOLVED	RECOV-ERABLE (UG/L AS FE)	TOTAL	SOLVED	RECOV-ERABLE (UG/L AS PB)	TOTAL	SOLVED	RECOV-ERABLE (UG/L AS PB)	TOTAL	SOLVED	RECOV-ERABLE (UG/L AS LI)
MAR 30...	<3	3	0	4	510	370	140	1	1	0	0	0	0	0	0	0	0	0	0	0	0
MAY 19...	<3	12	8	4	2500	2400	60	2	0	3	10	0	0	0	0	0	0	0	0	0	0
20...	<3	8	6	2	1400	1300	70	2	0	3	10	0	0	0	0	0	0	0	0	0	0
23...	<3	8	--	<10	630	540	86	3	3	0	10	0	0	0	0	0	0	0	0	0	0
28...	<3	5	--	<10	590	490	100	5	--	<10	0	0	0	0	0	0	0	0	0	0	0
JUN 12...	<3	4	--	<10	870	750	120	8	8	0	0	0	0	0	0	0	0	0	0	0	0

## 1250000 - N.F. SIMCOE CR NR FORT SIMCOE

WATER QUALITY DATA									
	MANGANESE	MANGANESE	MERCURY	MERCURY	MERCURY	MOLYBDENUM	NICKEL	NICKEL	NICKEL
LITHIUM	SUS-PENDED	SUS-PENDED	TOTAL RECOVERABLE	SUS-PENDED	TOTAL RECOVERABLE	SOLVED (UG/L AS MO)	TOTAL, DIS-SOLVED (UG/L AS NI)	TOTAL, DIS-SOLVED (UG/L AS NI)	TOTAL, DIS-SOLVED (UG/L AS NI)
(UG/L AS LI)	(UG/L AS MN)	(UG/L AS MN)	(UG/L AS HG)	(UG/L AS HG)	(UG/L AS HG)	(UG/L AS MO)	(UG/L AS NI)	(UG/L AS NI)	(UG/L AS NI)
MAR * 1980	<4	<4	10	7	.1	.1	--	0	0
30....									2
MAY	<4	60	40	20	.6	.2	--	6	4
19....									2
20....	<4	20	10	10	.0	.0	--	21	20
23....	5	30	4	1	.1	.1	<10	4	1
28....	<4	20	10	1.0	.6	.4	<10	5	5
JUN									2
12....	<4	40	20	.22	.2	.0	<10	5	3
									2
									3
SELENIUM	SELENIUM	SELENIUM	SILVER	SELENIUM	SILVER	STRONTIUM	VANADIUM	ZINC	ZINC
SELENIUM	SUS-PENDED	SUS-PENDED	TOTAL RECOVERABLE	SUS-PENDED	TOTAL RECOVERABLE	SOLVED (UG/L AS SR)	TOTAL, DIS-SOLVED (UG/L AS V)	TOTAL, DIS-SOLVED (UG/L AS ZN)	TOTAL, DIS-SOLVED (UG/L AS ZN)
(UG/L AS SE)	(UG/L AS SE)	(UG/L AS SE)	(UG/L AS AG)	(UG/L AS AG)	(UG/L AS AG)	(UG/L AS SR)	(UG/L AS V)	(UG/L AS ZN)	(UG/L AS ZN)
MAR * 1980	0	0	0	0	0	--	--	20	10
30....									6
MAY	0	0	0	0	0	--	--	20	--
19....									<3
20....	0	0	0	0	0	--	30	--	<3
23....	0	0	0	0	0	39	8.0	30	13
2H....	0	0	0	0	0	40	<6.0	20	<3
JUN									
12....	0	0	0	0	0	44	9.0	20	--
									<3

## 12510500 - YAKIMA RIVER AT KIONA, WASH.

## WATER QUALITY DATA

DATE	TIME	WATER QUALITY DATA									
		SPE- CIFIC CON- DUCT- ANCE (MICRO- MOHS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TURP- ID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS./ 100 ML)	HARD- NESS (MG/L AS CACO3)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
APR 16... 1980	1330	1.48	--	12.8	14	9.8	100	--	56	--	14
MAY 06...	1500	1.24	--	15.6	21	9.6	310	110	50	--	13
1630	185	7.9	17.4	63	9.1	570	--	67	4.9	17	
30...	1330	218	7.8	17.4	9.4	10.1	260	47	87	9.9	22
JUN 06...	1115	245	8.4	16.5	1.9	9.7	54	31	88	14	22
12...	1300	269	8.3	18.0	5.7	120	28	96	--	24	
19...	1145	216	7.8	20.3	130	7.9	830	920	73	--	19
25...	1215	240	8.2	18.7	18	9.2	K1000	--	85	--	22
JUL 24...	1100	306	8.4	23.6	7.3	8.6	100	390	116	--	30
AUG 11...	1400	313	8.6	23.0	3.5	9.0	55	19	114	--	29
SEP 09...	1510	319	8.6	20.6	6.9	10.4	200	--	114	.0	29
MAGNE- SIUM,	SODIUM, DIS- SOLVED (MG/L AS MG)	POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	ALKAL- INITY (MG/L AS K)	CARBON- DIOXIDE SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L SI102)	SOLIDS, RESIDUE AT 180 DEG. C	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
APR 16... 1980	5.2	7.4	1.8	60	--	5.8	3.2	.1	21	98	94
MAY 06...	4.4	6.5	1.4	50	--	5.0	2.6	.1	19	100	82
21...	6.0	9.3	2.0	53	1.0	15	12	.2	20	124	114
30...	7.8	12	2.3	84	2.1	16	13	.1	23	143	147
JUN 06...	8.1	12	2.5	100	.6	13	5.3	.2	21	148	144
12...	8.9	15	1.3	110	.8	14	5.4	.1	20	156	155
19...	6.4	11	2.6	83	2.0	13	5.4	.2	21	128	129
25...	7.5	12	2.5	91	.9	13	5.4	.2	22	148	139
JUL 24...	10	17	3.5	120	.7	34	5.2	.2	24	190	196
AUG 11...	10	16	3.2	120	.4	21	7.1	.3	22	190	181
SEP 09...	10	17	3.5	120	.4	19	7.5	.3	24	198	183

## 12510500 - YAKIMA RIVER AT KIONA, WASH.

## WATER QUALITY DATA

	SOLIDS, DIS- SOLVED (TONS PER DATE	SOLIDS, RESIDUE AT 105 DEG. C., PENDED (AC-FT)	NITRO- GEN, NO2+N03 TOTAL (MG/L AS N)	NITRO- GEN, NO2+N03 SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORG. TOTAL (MG/L AS N)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)
APR , 1980										
16...	.13	113	.30	.33	.040	.040	1.5	1.4	1.6	.10
MAY										
06...	.13	113	.36	.41	.060	.030	.55	.42	.61	.16
21...	.16	16	.76	.74	.040	.060	.50	.42	.54	.06
30...	.19	--	1.0	.95	.060	.060	.42	.32	.48	.10
JUN										
06...	.20	--	.96	.96	.030	.000	.79	.38	.82	.44
12...	.21	18	1.1	1.1	.000	.000	.59	.36	.59	.23
19...	.17	--	.98	.99	.030	.000	.97	.51	1.0	.49
25...	.20	--	.84	.97	.000	.000	1.8	.37	1.8	1.4
JUL										
24...	.25	15	1.6	1.7	.000	.000	1.5	.87	1.5	.63
AUG										
11...	.25	13	1.5	1.6	.000	.000	.87	.53	.87	.34
SEP										
09...	.26	8	1.7	1.8	.000	.010	1.3	.67	1.3	.62

	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, DIS- TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE DISSDL. TOTAL (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)
APR , 1980										
16...	1.5	1.9	1.8	.190	.050	--	--	--	4.4	1.0
MAY										
06...	.45	.97	.86	.160	.050	--	--	--	--	--
21...	.48	1.3	1.2	.180	.070	--	--	4.6	--	--
30...	.38	1.4	1.3	.110	.060	--	--	--	--	--
JUN										
06...	.38	1.7	1.3	.080	.060	--	--	--	--	--
12...	.36	1.6	1.5	.090	.010	--	--	8.7	--	--
19...	.51	1.9	1.5	.400	.080	--	--	--	--	--
25...	.37	2.6	1.3	.150	.080	--	--	--	--	--
JUL										
24...	.87	3.1	2.6	.140	.100	--	--	--	2.3	.5
AUG										
11...	.53	2.3	2.1	.130	.130	.070	.080	4.0	--	--
SEP										
09...	.68	3.0	2.5	.090	.110	.090	.090	3.4	--	--

## WATER QUALITY DATA

DATE	ALUM- INUM, TOTAL	ALUM- SUS- PENDED	ANTI- MONY, SUS- PENDED	ANTI- MONY, TOTAL	ARSENIC SUS- PENDED	ARSENIC SUS- TOTAL	BARIUM, SUS- PENDED			
APR * 1980	--	--	--	--	2	1	100	80	20	20
16....	600	440	160	0	2	0	2	0	0	20
21....	930	730	200	0	2	0	2	0	0	30
30....										
JUN										
06....	420	370	50	0	3	0	3	0	0	30
12....	460	410	50	0	3	0	3	0	0	30
19....	10000	9900	60	--	2	0	3	100	80	20
25....	760	750	10	--	3	0	3	0	0	30
JUL										
24....	--	--	--	--	5	1	4	100	60	40
AUG										
11....	280	270	10	--	4	0	4	0	0	40
SEP										
09....	250	230	20	--	3	1	2	0	0	40

DATE	BERYL- LIUM, TOTAL	BERYL- SUS- PENDED	BORON, RECOV- ENABLE	BORON, DIS- RECOV- ENABLE	CADMIUM, SUS- PENDED	CADMIUM, TOTAL	CHRO- MIUM, SUS- PENDED	CHRO- MIUM, TOTAL	COBALT, SUS- PENDED	
APR * 1980	--	--	--	0	0	1	0	0	0	--
16....	MAY	<1	30	>0	/	0	1	0	0	5
21....	<1	40	10	30	0	--	<1	0	0	5
30....										
JUN										
06....	<1	30	0	40	0	--	<1	0	0	--
12....	<1	40	10	30	0	--	<1	0	0	--
19....	<1	30	10	20	0	0	1	10	0	--
25....	<1	30	10	20	0	--	<1	0	0	2
JUL										
24....	<1	--	--	0	--	<1	20	10	10	2
AUG										
11....	--	60	10	>0	1	0	1	0	0	3
SEP										
09....	--	70	70	0	1	1	10	10	0	0

12510500 - YAKIMA RIVER AT KIONA, WASH.

WATER QUALITY DATA

DATE	APR • 1980	COBALT, DIS- SOLVED (UG/L AS CO)		COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)		IRON, COPPER, DIS- SOLVED (UG/L AS CU)		IRON, IRON, TOTAL RECOV- ERABLE (UG/L AS FE)		LEAD, IRON, TOTAL RECOV- ERABLE (UG/L AS FE)		LEAD, IRON, TOTAL RECOV- ERABLE (UG/L AS FE)		LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)		LITHIUM SUS- PENDED RECOV- ERABLE (UG/L AS LI)	
		16...	<3	9	6	3	4400	4400	40	4	1	3	--	--	--	--	--
MAY		0	11	9	2	<10	2700	2700	30	4	4	0	0	0	0	0	--
JUN		<3	7	--	<10	1000	980	18	4	--	<10	0	0	0	0	0	--
JUL		<3	6	--	<10	810	760	46	3	--	<10	10	10	5	5	5	--
AUG		<3	5	--	<10	910	880	27	6	0	0	0	0	0	0	0	--
SEP		<3	23	--	<10	18000	18000	110	4	0	10	0	0	0	0	0	--
OCT		<3	7	--	<10	1500	1500	38	3	0	<10	0	0	0	0	0	--
NOV		<3	13	8	5	1000	990	10	6	3	3	3	3	3	3	3	--
DEC		<3	8	5	3	960	940	20	3	3	3	0	0	0	0	0	--

		MANGANESE		MANGANESE		MERCURY		MOLYBDENUM		NICKEL	
		SUSPENDED	PENDED	SUSPENDED	PENDED	TOTAL	RECOVERABLE	TOTAL	RECOVERABLE	TOTAL	SUSPENDED
LITHIUM	DATE	AS LI)	(UG/L)	AS MN)	(UG/L)	AS MN)	(UG/L)	AS HG)	AS MO)	(UG/L)	(UG/L)
APR • 1980	16...	--	120	110	10	0	0	.1	--	5	0
MAY	21...	7	80	70	10	.3	.1	.2	<10	9	0
JUN	30...	<4	40	30	6	.7	.2	.5	<10	5	2
JUL	06...	5	50	40	13	.2	.1	.1	<10	7	0
	12...	<4	60	50	5	.1	.0	.2	<10	5	4
	19...	7	420	420	4	.2	.2	.0	<10	11	0
	25...	6	70	70	5	.0	.0	.0	<10	5	0
AUG	24...	<4	50	40	8	.1	.0	.2	<10	17	7
Sept	11...	<4	60	50	7	.8	.5	.3	--	3	0
OCT	09...	5	50	40	6	.5	.0	.5	--	2	0

## 12510500 - YAKIMA RIVER AT KIONA, WASH.

WATER QUALITY DATA											
	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED TOTAL (UG/L AS SE)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, SUS- PENDED TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECov- ERABLE (UG/L AS ZN)	
APR + 1980	0	0	0	1	1	0	--	--	30	--	<3
MAY	0	0	0	0	0	0	76	9.0	30	20	10
21***	0	0	0	0	0	0	100	<6.0	20	--	<3
30***	0	0	0	0	0	0	--	--	--	--	--
JUN	0	0	0	0	0	0	--	--	--	--	--
06***	0	0	0	0	0	0	110	8.0	20	--	<3
12***	0	0	0	0	0	0	120	7.0	30	--	<3
19***	0	0	0	0	0	0	92	<6.0	60	--	<3
25***	0	0	0	0	0	0	110	<6.0	140	--	<3
JUL	0	0	0	0	0	0	140	<6.0	30	--	<3
24***	0	0	0	2	2	0	--	--	20	--	<3
AUG	0	0	0	0	0	0	--	--	30	--	<3
11***	0	0	0	0	0	0	--	--	--	--	--
Sep	0	0	0	0	0	0	--	--	--	--	--
04***	0	0	0	0	0	0	--	--	--	--	--

## 13344520 - TUCANNON R AT POWERS

## WATER QUALITY DATA

SPT-CIFIC CUN- DUCT- ANCE (MICRO- MHOS)	TIME (HHMM)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN- DIS- SOLVED (MG/L)	HAR- NESS AS CACO3)	ACIOTY AS CACO3)	CALCIUM DIS- SOLVED (MG/L) AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K)
<b>MAR , 1980</b>										
25.... APR	1150	150	7.0	8.8	--	--	--	--	--	--
22.... MAY	1200	120	7.1	12.2	--	--	--	--	--	--
29.... JUN	1010	110	6.9	14.4	--	--	--	--	--	--
29.... JUN	1640	101	6.2	18.5	1.6	9.2	4.3	4.9	11	2.3
13.... JUN	1145	103	7.0	14.4	5.4	10.2	4.0	4.9	9.9	2.5
24.... JUN	1000	160	7.0	15.7	--	--	--	--	--	--
26.... JUN	1115	124	8.2	16.6	15	10.0	5.2	--	4.9	2.8

DATE	ALKALI- LITY (MG/L) AS CACO3)	CATION DILOXIDE SULFATE SOLVED (MG/L) AS CL)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F)	SILICA, DIS- SOLVED (MG/L) AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C	SOLIDS, CONSTITUENTS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, SUM OF DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 TOTAL (MG/L) AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L) AS N)
<b>MAR , 1980</b>										
25.... APR	--	--	--	--	--	--	--	--	.55	--
22.... MAY	--	--	--	--	--	--	--	.28	--	.000
29.... JUN	52	52	--	--	--	--	--	.14	--	.010
13.... JUN	28	*7	*1	*9	*1	38	92	.12	.23	.070
24.... JUN	60	6.0	6.0	1.0	1.0	37	92	.12	.09	.000
25.... JUN	--	--	--	--	--	--	--	.13	.04	.030
								107	.07	.030

## 13344520 - TUCANNON R AT POWERS

## WATER QUALITY DATA

	NITRO- GEN, AMMONIA	NITRO- GEN, GENERIC ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH4 MONIA + ORG. DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORG. ORGANIC TOTAL SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL DIS. TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL DIS. TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED TOTAL (MG/L AS P)	NITRO- GEN, DIS- SOLVED TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH- OSPHATE DISSOL.
MAR 9 1980	--	--	--	--	--	--	--	.120	--
APR 25***	--	--	--	--	--	--	--	--	.070
MAY 22***	--	--	--	--	--	--	--	.240	--
MAY 29***	--	--	--	--	--	--	--	.070	--
JUN 060	.060	.79	.32	.86	.48	.38	1.0	.44	.060
JUN 13***	.000	.78	.47	.78	.51	.47	.87	.60	.160
JUN 24***	--	--	--	--	--	--	--	.090	--
JUN 26***	.030	.33	.033	.55	.36	.95	.43	.160	.090

## 13344520 - TUCANNON R AT POWERS

## WATER QUALITY DATA

	ALUM- INUM, TOTAL RECOV- ERABLE DATE	ALUM- INUM, SUS- PENDED RECOV. (UG/L AS AL)	ALUM- INUM, DIS- RECOV. (UG/L AS AL)	ANTI- MONY, TOTAL (UG/L AS SB)	SUS- PENDED DIS- SOLVED (UG/L AS SB)	ANTI- MONY, TOTAL (UG/L AS SB)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)
<b>MAY , 1980</b>									
29...	340	290	50	0	0	0	2	0	2
JUN									0
13...	500	470	30	0	0	0	1	0	1
26...	480	460	20	--	--	--	2	0	2
<b>CHRO- MIUM,</b>									
	BARIUM, SUS- PENDED RECOV- ERABLE DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, SOLVED (UG/L AS BA)	BORON, TOTAL (UG/L AS BE)	SUS- PENDED RECOV- ERABLE (UG/L AS B)	BORON, TOTAL (UG/L AS B)	CADMIUM TOTAL (UG/L AS CD)	CADMIUM TOTAL (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
<b>MAY , 1980</b>									
29...	0	20	<1	30	10	20	0	<1	0
JUN									
13...	80	20	<1	50	10	40	0	<1	0
26...	0	20	<1	30	0	30	0	<1	10
	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL (UG/L AS CO)	COBALT, RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL (UG/L AS CU)	COPPER, RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL (UG/L AS FE)	IRON, TOTAL (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
<b>IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)</b>									
<b>MAY , 1980</b>									
29...	0	0	0	<3	5	<10	610	550	61
JUN									
13...	0	0	0	<3	12	<10	2800	2800	46
26...	10	0	3	<3	6	<10	2200	2200	35

## 13344520 - TUCANNON R AT POWERS

## WATER QUALITY DATA

	LEAD, TOTAL RECOV- ERABLE DATE	SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS PB)	LITHIUM DIS- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
MAY , 1980								
29...	2	--	<10	0	<4	30	20	7
JUN								
13...	8	--	<10	0	<4	90	80	13
26...	4	4	0	10	<4	70	60	14

	MERCURY TOTAL RECOV- ERABLE DATE	SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- ERABLE (UG/L AS HG)	MOLYB- DENUM, SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)		
MAY , 1980									
29...	.1	.0	.2	<10	5	3	2	0	0
JUN									
13...	.6	.1	.5	<10	14	10	4	0	0
26...	.0	.0	.0	<10	14	14	0	0	0

	SELE- NIUM, DIS- SOLVED DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, RECov- ERABLE (UG/L AS AG)	SILVER, DIS- ERABLE (UG/L AS AG)	STRON- TIUM, SOLVED (UG/L AS AG)	VANA- DIUM, SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAY , 1980								
29...	0	0	0	0	39	<6.0	20	<3
JUN								
13...	0	0	0	0	40	8.0	20	<3
26...	0	0	0	0	49	12	70	<3

## 14110720 - OUTLET CR NR GLENWOOD, WASH

## WATER QUALITY DATA

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C.)	TURBIDITY (NTU)	OXYGEN, DISOLVED (MG/L)	HARDNESS, AS CACO <sub>3</sub> )	ACIDITY (MG/L AS CACO <sub>3</sub> )	CALCIUM, DISOLVED (MG/L AS CACO <sub>3</sub> )	MAGNESIUM, DISOLVED (MG/L AS CACO <sub>3</sub> )	SODIUM, DISOLVED (MG/L AS CACO <sub>3</sub> )	POTASSIUM, DISOLVED (MG/L AS CACO <sub>3</sub> )
MAR 9 1980	1145	53	6.5	6.7	3.1	9.8	21	9.9	5.0	2.3	3.0	1.0
29... 30...	1645	52	6.2	7.4	2.7	11.0	21	4.9	5.0	2.3	3.0	.9
APR 09...	1200	53	6.4	9.8	4.2	9.0	23	4.9	5.1	2.5	3.1	1.0
MAY 19... 29...	1155 1530	56	7.4	14.3	4.0	9.0	24	0	5.4	2.6	2.6	.6
JUN 10...	1245	58	7.4	20.0	1.6	8.9	25	--	5.6	2.7	2.9	.6
ALKALINITY (MG/L AS CACO <sub>3</sub> )	CARBON DIOXIDE (MG/L AS CO <sub>2</sub> )	SULFATE DISOLVED (MG/L AS SO <sub>4</sub> )	CHLORIDE, DISOLVED (MG/L AS CL)	FLUORIDE, DISOLVED (MG/L AS F)	SILICA, DISOLVED (MG/L AS SiO <sub>2</sub> )	SOLIDS, RESIDUE AT 180 DEG. C	SOLIDS, SUM OF CONSTITUENTS, DISOLVED (TONS PER AC-FT)	SOLIDS, SUM OF DISOLVED (MG/L AS N)	SOLIDS, DISOLVED (TONS PER AC-FT)	NITROGEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (MG/L AS N)	NITROGEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (MG/L AS N)	
MAR 9 1980	23	11	1.0	0	25	65	52	.08	.01	.03	.00	
29... 30...	23	1.4	.9	.0	25	65	52	.06	.01	.00		
APR 09...	25	15	3.8	1.5	.1	23	59	.08	.08	.03		
MAY 19... 29...	24	1.5	1.5	.2	.0	23	56	.07	.11	.07	.02	
JUN 10...	27	1.0	1.3	.4	.1	22	57	.07	.01	.01		
	30	1.8	1.3	.4	.0	19	55	.07	.02	.01		

## 14110720 - OUTLET CR NR GLENWOOD, WASH

## WATER QUALITY DATA

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ANTI- MONY, SUS- PENDED TOTAL (UG/L AS SB)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ANTI- MONY, TOTAL (UG/L AS SB)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	
MAR 9 1980	250	210	40	--	--	--	2	1	1	1	0	0
29...	270	230	40	--	--	--	2	1	1	100	80	20
APR 09...	350	310	40	--	--	--	0	0	1	0	0	10
MAY 19...	140	110	30	--	--	--	1	0	1	0	0	20
JUN 29...	80	60	20	0	0	0	1	0	1	0	0	20
JUN 10...	90	90	0	0	0	0	1	0	1	0	0	10

## 14110720 - OUTLET CR NR GLENWOOD, WASH

## WATER QUALITY DATA

	BERYL-LIUM, DIS-SOLVED (UG/L)	BORON, SUS-PENDED (AS BE)	BORON, TOTAL DIS-SOLVED (UG/L AS B)	CADMIUM SUS-PENDED (UG/L AS CD)	CADMIUM TOTAL DIS-SOLVED (UG/L AS CR)	CHRO-MIUM SUS-PENDED (UG/L AS CR)	CHRO-MIUM TOTAL DIS-SOLVED (UG/L AS CR)	COBALT, SUS-PENDED (UG/L AS CO)
MAR 29...	--	30	20	8	0	<1	0	0
30...	--	60	50	10	0	<1	0	0
APR 09...	--	90	70	20	0	0	0	0
MAY 19...	--	10	0	30	0	0	0	--
29...	<1	30	0	30	1	--	0	--
JUN 10...	<1	50	30	20	0	--	<1	0
							0	0

	COBALT, SUS-PENDED (AS CO)	COPPER, SUS-PENDED (AS CU)	IRON, SUS-PENDED (AS FE)	IRON, TOTAL DIS-SOLVED (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, SUS-PENDED (UG/L AS PB)	LEAD, TOTAL DIS-SOLVED (UG/L AS PB)	LITHIUM SUS-PENDED (UG/L AS LI)
MAR 29...	<3	7	3	4	350	180	170	3
30...	<3	6	4	2	280	140	140	6
APR 09...	<3	4	3	1	390	240	150	3
MAY 19...	<3	4	3	1	800	420	380	1
29...	<3	6	--	<10	650	180	470	--
JUN 10...	<3	3	--	<10	810	310	500	7
							--	--

114110720 - OUTLET CR NR GLENWOOD, WASH

WATER QUALITY DATA

SELL- NIUM, SUS- PENDED TOTAL TOTAL (UG/L AS SE)	SELL- NIUM, SUS- PENDED TOTAL TOTAL (UG/L AS SE)	SELL- NIUM, SUS- PENDED TOTAL TOTAL (UG/L AS SE)	SELL- NIUM, SUS- PENDED TOTAL TOTAL (UG/L AS SE)	SILVER, SUS- PENDED TOTAL TOTAL (UG/L AS AG)	SILVER, DIS- RECOV- ERABLE SOLVED (UG/L AS AG)	SILVER, DIS- RECOV- ERABLE SOLVED (UG/L AS AG)	SILVER, DIS- RECOV- ERABLE SOLVED (UG/L AS AG)	SILVER, DIS- RECOV- ERABLE SOLVED (UG/L AS SR)	SILVER, DIS- RECOV- ERABLE SOLVED (UG/L AS V)	VANA- DIUM, DIS- SOLVED (UG/L AS ZN)	ZINC, SUS- PENDED TOTAL DIS- RECOV- ERABLE SOLVED (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	
DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
MAR * 1980				29...*	0	0	0	0	0	--	10	6	4
				30...*	0	0	0	0	0	--	40	40	<3
				APR	0	0	0	0	0	--	10	7	<3
				09...*	0	0	0	0	0	--	--	60	5
				MAY	0	0	0	0	0	--	60	60	5
				19...*	0	0	0	0	0	41	<6.0	20	4
				29...*	0	0	0	0	0	--	60	20	--
				JUN	0	0	0	0	0	46	<6.0	20	--
				10...*	0	0	0	0	0	--	--	--	<3

## 14111500 - KLICKITAT R BLW GLENWOOD

## WATER QUALITY DATA

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)			TEMPERATURE, WATER (DEG C)			TURBIDITY (NTU)			OXYGEN, DIS-SOLVED (MG/L)			HARDNESS (MG/L AS CACO <sub>3</sub> )			ACIDITY (MG/L AS CACO <sub>3</sub> )			CALCIUM DIS-SOLVED (MG/L AS CA)			MAGNESIUM, DIS-SOLVED (MG/L AS MG)			SODIUM, DIS-SOLVED (MG/L AS NA)			POTASSIUM, DIS-SOLVED (MG/L AS K)		
		PH FIELD (UNITS)	DUCT-ANCE (MICRO-MHOS)	DUCT-ANCE (MICRO-MHOS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CACO <sub>3</sub> )	HARDNESS (MG/L AS CACO <sub>3</sub> )	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CACO <sub>3</sub> )	HARDNESS (MG/L AS CACO <sub>3</sub> )	ACIDITY (MG/L AS CACO <sub>3</sub> )	ACIDITY (MG/L AS CACO <sub>3</sub> )	ACIDITY (MG/L AS CACO <sub>3</sub> )	CALCIUM, DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTASSIUM, DIS-SOLVED (MG/L AS K)											
MAR 29...	1400	1330	64	7.2	6.4	3.0	12.2	26	9.9	.8	2.9	5.8	2.9	3.3	1.2																
30...	1530	61	7.1	6.9	3.1	12.2	26	4.9	5.8	.6	2.8	5.8	2.8	3.4	1.2																
APR 09...	1515	62	6.8	7.4	11	--	23	4.9	5.3	--	2.5	5.3	2.5	3.1	1.1																
MAY 19...	1330	85	7.1	9.9	130	10.2	27	.0	7.0	1.9	2.5	5.6	2.5	4.6	1.5																
29...	1330	65	7.8	10.5	1.9	--	23	9.9	5.6	--	2.3	5.6	2.3	3.3	1.3																
JUN 10...	1015	63	7.9	7.7	2.2	11.4	23	--	5.3	--	2.4	5.3	2.4	3.3	1.1																
ALKALINITY (MG/L AS CO <sub>2</sub> )																															
CARBON DIOXIDE (MG/L AS CO <sub>2</sub> )																															
MAR 29...	1980	28	2.6	.9	.8	.0	30	67	61	.0	30	67	61	.0	.03	.02															
30...	29	3.0	.8	.6	.0	.0	30	63	62	.0	30	63	62	.0	.04	.02															
APR 09...	27	6.8	2.5	1.2	.1	28	64	60	.0	28	64	60	.0	.08	.04																
MAY 19...	24	3.0	9.2	4.2	.1	23	65	66	.0	23	65	66	.0	.05	.08																
29...	25	.6	1.6	1.6	.1	26	60	56	.0	26	60	56	.0	.02	.03																
JUN 10...	27	.5	4.6	1.3	.0	24	53	58	.0	24	53	58	.0	.07	.00																
SOLIDS, RESIDUE AT 180 DEG. C																															
SOLIDS, CONSTI-TUENTS, DIS-SOLVED (TONS PER AC-FT)																															
NITROGEN, NO <sub>2</sub> +NO <sub>3</sub>																															
NITROGEN, NO <sub>2</sub> +NO <sub>3</sub>																															
NITROGEN, NO <sub>2</sub> +NO <sub>3</sub>																															

## 14111500 - KLICKITAT R BLW GLENWOOD

## WATER QUALITY DATA

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH <sub>4</sub> + ORG. ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + SUSP. TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS P)
MAR , 1980	.000	.000	.40	.38	.40	.02	.38	.43
29***	.000	.000	.46	.33	.46	.13	.33	.50
30***	.000	.000						
APR	.020	.000	.51	.65	.53	.00	.65	.62
MAY								
19***	.080	.100	1.1	.20	1.2	.90	.30	1.2
29***	.010	.010	.24	.25	.25	.00	.26	.27
JUN								
10***	.000	.000	.31	.18	.31	.13	.18	.31

DATE	ALUM- INUM, TOTAL RECov- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- RECov. (UG/L AS AL)	ANTI- MUNY, TOTAL SOLVED (UG/L AS SB)	ANTI- MUNY, PENDED TOTAL (UG/L AS SB)	ANTI- MUNY, SOLVED (UG/L AS SB)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC PENDED TOTAL (UG/L AS AS)	ARSENIC SOLVED (UG/L AS AS)
MAR , 1980	380	300	80	--	--	1	0	1
29***	190	110	80	--	--	1	0	0
30***								
APR								
09***	1900	1800	100	--	--	0	0	1
MAY								
19***	660	610	50	--	--	2	0	2
29***	510	470	40	0	0	1	0	0
JUN								
10***	230	180	50	0	0	1	0	0

## 14111500 - KLICKITAT R BLW GLENWOOD

WATER QUALITY DATA									
		BORON, SUS- PENDED	CADMIUM TOTAL	CADMIUM PENDED	CADMIUM TOTAL	CHRO- MUM, SUS- PENDED	CHRO- MUM, SUS- PENDED	CHRO- MUM, SUS- PENDED	LITHIUM SUS- PENDED
BERYL- LIUM, TOTAL	DIS- RECOV- ERABLE	RECOV- ERABLE	RECOV- ERABLE	RECOV- ERABLE	SOLVED	DIS- RECOV- ERABLE	SOLVED	DIS- RECOV- ERABLE	DIS- RECOV- ERABLE
(UG/L)	(UG/L)	(UG/L AS B)	(UG/L AS B)	(UG/L AS B)	(UG/L AS CD)	(UG/L AS CD)	(UG/L AS CR)	(UG/L AS CR)	(UG/L AS CR)
DATE	AS BE)								
MAR • 1980									
29•••	--	80	70	6	0	0	3	20	0
30•••	--	50	40	6	0	<1	20	20	0
APR									
09•••	--	140	130	10	0	<1	0	0	5
MAY									2
19•••	--	20	0	20	1	0	4	0	--
29•••	<1	10	0	20	0	--	<1	0	--
JUN									
10•••	<1	30	10	20	1	--	<1	0	--
MAR • 1980									
29•••	<3	8	6	2	290	180	110	15	0
30•••	<3	6	4	2	250	130	120	5	0
APR									--
09•••	<3	5	3	2	1900	1800	130	6	2
MAY									0
19•••	<3	33	24	4	3400	3400	50	12	0
29•••	<3	12	--	<10	340	300	39	76	--
JUN									--
10•••	<3	3	--	<10	280	240	38	5	0
									--
MAR • 1980									
29•••									

## 14111500 - KLICKITAT R BLW GLENWOOD

## WATER QUALITY DATA

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE • TOTAL PENDED RECOV- ERABLE (UG/L AS MN)	MANGA- NESE • SUS- PENDED RECOV. (UG/L AS MN)	MERCURY TOTAL DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL DIS- RECOV- ERABLE (UG/L AS HG)	MERCURY DENUM, DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L AS NI)
MAR , 1980	<4	10	7	3	.0	.0	.0	--	14
29.***	--	0	4	.0	.0	.0	--	4	12
30.***	--	0	0	.0	.0	.0	--	4	2
APR	09.***	<4	40	5	.0	.0	.1	--	2
MAY	19.***	<4	60	20	.7	.6	.1	--	2
19.***	<4	0	2	.3	.0	.3	<10	6	0
29.***	<4	0	0	.0	.0	.0	<10	6	5
JUN	10.***	<4	10	8	.2	.0	.5	<10	0
								0	1

DATE	SELF- NIUM, DIS- TOTAL (UG/L AS SE)	SELF- NIUM, DIS- TOTAL (UG/L AS SE)	SELF- NIUM, DIS- TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DENUM, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS AG)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)
MAR , 1980	0	0	0	0	0	0	--	--	10
29.***	0	0	0	0	0	0	--	--	40
30.***	0	0	0	0	0	0	--	--	40
APR	09.***	0	0	0	0	0	--	--	4
MAY	19.***	0	0	0	0	0	--	--	<3
29.***	0	0	0	0	0	0	32	40	<3
JUN	10.***	0	0	0	0	0	31	<6.0	5
								10	<3

## 14113000 - KLICKITAT RIVER NEAR PITT, WASH.

## WATER QUALITY DATA

		SPE- CIFIC CON- DUCT- ANCE	TIME (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. 100 ML)	HARD- NESS (MG/L AS CACO3)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
MAR , 1980												
29...	1600	73	7.1	7.8	4.1	12.4	--	--	27	4.9	6.2	
30...	1330	70	6.6	7.0	4.1	13.0	--	--	28	9.9	6.1	
31...	1600	70	6.8	7.0	3.2	12.6	--	--	28	4.9	6.4	
APR												
07...	1440	65	7.6	7.3	3.9	12.4	3	2	27	.0	6.1	
MAY												
13...	1615	56	7.4	12.8	4.0	10.5	3	3	19	4.9	4.5	
18...	2015	58	7.6	11.8	3.5	10.0	--	--	21	.0	5.0	
19...	1700	90	7.6	12.0	170	9.4	--	--	33	.0	8.1	
20...	1800	77	7.6	12.2	22	9.7	--	--	28	.0	6.7	
29...	0945	75	7.8	9.8	2.6	--	--	--	24	9.9	6.0	
JUN												
03...	1600	66	8.0	12.5	1.7	10.0	--	--	24	9.9	5.7	
09...	1630	67	8.1	15.2	1.5	9.4	3	3	25	--	5.8	
17...	0945	67	7.6	12.8	70	10.0	--	--	24	--	5.7	
23...	1700	65	7.9	15.6	10	10.2	--	--	23	--	5.6	
JUL												
17...	1500	73	7.7	14.2	11	10.2	3	1	25	4.9	6.0	
AUG												
13...	1715	76	7.7	18.6	15	9.3	40	32	28	4.9	6.1	
SEP												
17...	0945	94	7.9	12.3	7.6	9.9	18	35	29	.0	6.7	

	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	CARBON DIOXIDE (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS CO2)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, AT 180 DEG. C DIS- SOLVED (MG/L)	
MAR , 1980										
29...	2.9	3.6	1.3	30	3.7	1.3	1.0	.1	30	71
30...	3.1	3.5	1.2	30	11	2.7	1.0	.1	30	74
31...	3.1	3.6	1.3	30	7.5	1.4	.9	.1	31	78
APR										
07...	2.9	3.6	1.1	30	1.1	2.5	1.1	.1	29	72
MAY										
13...	2.0	2.6	1.0	21	1.3	.9	.7	.1	22	47
18...	2.3	3.0	1.0	22	.8	1.1	1.0	.1	24	51
19...	3.1	5.4	1.6	26	1.0	11	5.3	.1	25	71
20...	2.8	4.1	1.3	27	1.0	6.7	2.6	.1	25	60
29...	2.3	3.7	1.3	27	.6	6.1	1.6	.1	27	62
JUN										
03...	2.4	3.5	1.3	33	.5	1.6	.3	.1	25	76
09...	2.6	3.5	1.4	23	.2	6.5	1.3	.1	25	55
17...	2.6	3.4	1.3	25	.9	3.0	1.8	.1	24	69
23...	2.4	3.4	1.5	31	.6	2.0	1.5	.1	26	60
JUL										
17...	2.5	4.0	1.6	43	1.3	1.1	.7	.2	27	66
AUG										
13...	3.1	3.9	1.5	31	.9	7.3	.8	.1	29	66
SEP										
17...	3.2	4.3	1.7	34	.6	.7	2.2	.1	30	110

## 14113000 - KLICKITAT RIVER NEAR PITT, WASH.

## WATER QUALITY DATA

SOLIDS, SUM OF CONSTITUENTS, DIS-	SOLIDS, SOLVED (TONS PER SOLVED DATE (MG/L)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (MG/L) AC-FT)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> SOLVED (MG/L) AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L) AS N)	NITRO- GEN, AMMONIA SOLVED (MG/L) AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L) AS N)	NITRO- GEN, AM- MONIA + ORGANIC SOLVED TOTAL (MG/L) AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L) AS N)	NITRO- GEN,NH <sub>4</sub> TOTAL (MG/L) AS N)	
MAR , 1980										
29...	64	.09	.20	.20	.100	.040	.44	.29	.54	.21
30...	65	.10	.00	.18	.060	.020	.33	.30	.39	.07
31...	66	.10	.20	.17	.000	.000	.25	.30	.25	.00
APR										
07...	64	.09	.11	.08	.020	.000	.55	.59	.57	.00
MAY										
13...	46	.06	.03	--	.010	.000	.27	--	.28	--
18...	51	.06	.02	.02	.080	.120	2.8	1.9	2.9	.80
19...	75	.09	.06	.06	.080	.080	3.3	2.9	3.4	.40
20...	65	.08	.03	.03	.080	.100	2.0	1.8	2.1	.20
29...	64	.08	.02	.05	.010	.000	.23	.27	.24	.00
JUN										
03...	59	.10	.01	--	.000	--	.23	--	.23	.10
09...	60	.07	.00	.01	.000	.000	.61	.14	.61	.47
17...	57	.09	.04	.07	.150	.040	.49	--	.64	--
23...	61	.08	.01	.00	.000	.010	1.0	.26	1.0	.73
JUL										
17...	69	.09	.07	.00	.010	.030	.75	.32	.76	.41
AUG										
13...	70	.09	.00	.00	.070	.030	.17	.19	.24	.02
SEP										
17...	69	.15	.00	.00	.000	.000	.33	.37	.33	.00

NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L)	NITRO- GEN, DIS- TOTAL (MG/L)	NITRO- GEN, SOLVED (MG/L) AS N)	PHOS- PHORUS, TOTAL (MG/L) AS N)	PHOS- PHORUS, SOLVED (MG/L) AS P)	PHOS- ORTHOPH- OSPHATE TOTAL (MG/L) AS P)	PHOS- PHORUS, ORTHOPH- OSPHATE DISSOL. (MG/L) AS P)	PHOS- PHORUS, ORGANIC TOTAL (MG/L) AS C)	CARBON, ORGANIC DIS- SUS- PENDED (MG/L) AS C)	CARBON, ORGANIC SUS- PENDED (MG/L) AS C)	
MAR , 1980										
29...	.33	.74	.53	.060	.040	--	--	--	--	--
30...	.32	1.1	.50	.060	.040	--	--	--	--	--
31...	.30	.45	.47	.050	.030	--	--	--	--	--
APR										
07...	.59	.68	.67	.040	.050	--	--	--	1.9	.1
MAY										
13...	--	.31	--	.040	.030	--	--	--	--	--
18...	2.1	2.9	2.1	.040	.030	--	--	--	--	--
19...	3.0	3.4	3.1	.250	.030	--	--	--	--	--
20...	1.9	2.1	1.9	.080	.040	--	--	--	--	--
29...	.27	.26	.32	.030	.020	--	--	--	--	--
JUN										
03...	.13	.24	--	.040	.030	--	--	--	--	--
09...	.14	.61	.15	.080	.020	--	--	3.0	--	--
17...	--	.08	--	.040	.020	--	--	--	--	--
23...	.27	1.0	.27	.060	.040	--	--	--	--	--
JUL										
17...	.35	.83	.35	.090	.050	--	--	--	1.3	--
AUG										
13...	.22	.24	.22	.060	.030	.020	.010	1.3	--	--
SEP										
17...	.37	.33	.37	.060	.040	.020	.020	3.5	--	--

## 14113000 - KLICKITAT RIVER NEAR PITTS, WASH.

## WATER QUALITY DATA

DATE AS AL)	ALUM- INUM, TOTAL			ALUM- INUM, SUS- PENDED			ANTI- MONY, TOTAL			ANTI- MONY, DIS- PENDED			ARSENIC SUS- PENDED			ARSENIC TOTAL			BARIUM, SUS- PENDED		
	RECOV- ERABLE (UG/L)	(UG/L)	(AS AL)	SOLVED (UG/L)	(UG/L)	(AS SB)	TOTAL (UG/L)	(UG/L)	(AS SB)	SOLVED (UG/L)	(UG/L)	(AS SB)	TOTAL (UG/L)	(UG/L)	(AS AS)	SOLVED (UG/L)	(UG/L)	(AS BA)	RECOV- ERABLE (UG/L)	(UG/L)	(AS BA)
MAY • 1980	29...•	480	360	120	--	--	--	--	--	--	--	--	1	0	1	0	0	0	200	200	10
	30...•	650	530	120	--	--	--	--	--	--	--	--	1	0	1	0	0	0	0	0	10
	31...•	360	240	120	--	--	--	--	--	--	--	--	1	0	1	0	100	90	10		
APR																					
07...•	410	340	70	--	--	--	--	--	--	--	--	--	0	0	0	1	100	90	9		
MAY																					
13...•	620	580	40	--	--	--	--	--	--	--	--	--	1	0	1	0	--	--	9	9	
18...•	500	460	40	--	--	--	--	--	--	--	--	--	1	0	1	0	0	0	20	20	
19...•	3100	3000	70	--	--	--	--	--	--	--	--	--	2	0	2	0	0	0	10	10	
20...•	820	780	40	--	--	--	--	--	--	--	--	--	1	0	1	0	0	0	10	10	
29...•	640	610	30	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	20	
JUN																					
03...•	360	320	40	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	10
09...•	220	150	70	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	10
17...•	270	250	20	--	--	--	--	--	--	--	--	--	1	0	1	0	2	0	0	0	10
23...•	440	400	40	--	--	--	--	--	--	--	--	--	1	0	1	0	0	0	0	0	20
JUL																					
17...•	310	280	30	--	--	--	--	--	--	--	--	--	2	0	2	0	0	0	0	0	10
AUG																					
13...•	700	670	30	--	--	--	--	--	--	--	--	--	1	0	1	0	0	0	0	0	10
SEP																					
17...•	250	220	30	--	--	--	--	--	--	--	--	--	0	0	1	0	0	0	0	0	10

## 14113000 - KLICKITAT RIVER NEAR PITT, WASH.

## WATER QUALITY DATA

DATE	AS BE)	MERCURY				CADMIUM				CHROMIUM				COBALT,			
		BORON,	SUS- PENDED	BORON*	CADMIUM	CADMIUM	SUS- PENDED	TOTAL	CHROMIUM,	SUS- PENDED	TOTAL	MERCURY,	SUS- PENDED	RECOV-	ERABLE	(UG/L	
		TOTAL RECOV- ERABLE (UG/L)	RECOV- ERABLE (UG/L)	SOLVED (UG/L)	RECOV- ERABLE (UG/L)	RECOV- ERABLE (UG/L)	RECOV- ERABLE (UG/L)	SOLVED (UG/L)	RECOV- ERABLE (UG/L)	RECOV- ERABLE (UG/L)	SOLVED (UG/L)	RECOV- ERABLE (UG/L)	RECOV- ERABLE (UG/L)	SOLVED (UG/L)	RECOV- ERABLE (UG/L)	(UG/L	
MAR 9 1980		50	50	4	0	0	0	<1	0	0	0	0	0	2	0	0	
29... 30... 31... APR	-- -- -- 07... MAY	100	90	8	0	0	0	<1	0	0	0	0	0	2	0	0	
13... 18... 19... 20... 29... JUN	-- -- -- -- -- 03... 09... 17... 23... JUL	60	60	2	0	0	0	<1	0	0	0	0	0	1	0	0	
		90	0	90	0	0	0	<1	0	0	0	0	0	3	0	0	
		60	50	10	0	0	0	--	<1	0	0	0	0	--	--	--	
		9	0	20	0	0	0	0	1	0	0	0	0	--	--	--	
		10	0	20	1	1	0	--	<1	0	0	0	0	1	--	--	
		20	10	10	1	0	0	--	<1	0	0	0	0	0	--	--	
		20	0	20	0	0	0	--	<1	0	0	0	0	0	--	--	
		30	0	30	0	0	0	--	<1	0	0	0	0	0	--	--	
		50	40	6	0	0	0	--	<1	0	0	0	0	0	--	--	
		20	0	40	1	0	0	0	1	0	0	0	0	0	--	--	
		20	10	9	1	0	1	0	0	0	0	0	0	0	--	--	
		20	0	20	0	0	0	--	<1	0	0	0	0	0	--	--	
AUG	--	120	10	110	0	0	0	--	<1	10	10	0	0	1	--	--	
13... SEP	--																
17... 17... 17...	<1	20	0	20	1	0	0	--	<1	10	10	0	0	0	--	--	

## 14113000 - KLICKITAT RIVER NEAR PITT, WASH.

## WATER QUALITY DATA

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL, RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	IRON, IRON, TOTAL, RECOV- ERABLE (UG/L AS FE)		IRON, IRON, TOTAL, RECOV- ERABLE (UG/L AS FE)		LEAD, LEAD, TOTAL, RECOV- ERABLE (UG/L AS LI)	
				SOLVED (UG/L AS CU)	DIS- SOLVED (UG/L AS CU)	PENDED RECOV- ERABLE (UG/L AS FE)	SOLVED (UG/L AS FE)	PENDED RECOV- ERABLE (UG/L AS PB)	SOLVED (UG/L AS PB)
MAR 1980	13***	<3	8	6	2	580	440	140	12
29***	<3	9	7	2	720	590	130	10	0
30***	<3	5	2	3	320	180	140	4	0
31***	<3	5	2	3	320	180	140	4	0
APR									
07***	<3	2	1	1	540	430	110	4	0
MAY									
13***	<3	4	1	3	850	790	60	4	0
18***	<3	7	3	4	680	600	80	3	0
19***	<3	21	16	3	4200	4100	70	3	0
20***	<3	11	8	3	1100	1000	60	5	0
29***	<3	5	--	<10	500	450	47	9	--
JUN									
03***	<3	4	--	<10	350	300	51	5	--
09***	<3	4	--	<10	450	410	41	2	--
17***	<3	4	--	<10	460	440	43	1	--
23***	<3	8	--	<10	510	460	55	3	--
JUL									
17***	<3	20	18	2	20	0	30	7	0
AUG									
13***	<3	18	15	3	950	880	70	2	4
SEP									
17***	<3	10	--	<10	820	780	43	3	--
								<10	10
									5

## 14113000 - KLICKITAT RIVER NEAR PITT, WASH.

## WATER QUALITY DATA

DATE	LITHIUM DIS- SOLVED (UG/L AS Li)	MANGA- NESE, TOTAL SUS- PENDED RECOV- ERABLE (UG/L AS Mn)	MANGA- NESE, TOTAL SUS- PENDED RECOV- ERABLE (UG/L AS Mn)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS Hg)	MERCURY TOTAL RECOV- ERABLE (UG/L AS Hg)	MERCURY DIS- SOLVED (UG/L AS Hg)	MOLYB- DENUM, RECOV- ERABLE (UG/L AS Mo)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L AS Ni)
			MANGA- NESE, TOTAL SUS- PENDED RECOV- ERABLE (UG/L AS Mn)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS Hg)	MERCURY TOTAL RECOV- ERABLE (UG/L AS Hg)	MERCURY DIS- SOLVED (UG/L AS Hg)	MOLYB- DENUM, RECOV- ERABLE (UG/L AS Mo)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L AS Ni)
MAR 29 1980	<4	20	20	5	0	0	--	7
30 ***	<4	30	20	7	0	0	--	5
31 ***	<4	20	10	6	0	0	--	3
APR 07 ***	<4	10	6	4	.2	0	--	2
MAY 13 ***	<4	20	20	3	.8	.4	--	2
18 ***	5	40	20	20	.1	.0	.7	0
19 ***	8	90	80	10	.1	.1	0	3
20 ***	8	30	20	7	.1	.0	--	6
24 ***	<4	0	0	3	.4	0	.1	4
JUN 03 ***	<4	10	7	3	.1	.0	<10	5
09 ***	<4	10	6	4	2.4	1.1	1.3	5
17 ***	<4	0	0	4	.0	.0	<10	2
23 ***	5	40	40	4	.0	.0	<10	6
JUL 17 ***	<4	20	0	20	.1	.0	.3	6
AUG 13 ***	6	20	20	4	.4	.0	.5	0
SEP 17 ***	5	20	1	19	.1	.0	.1	7

## 14113000 - KLICKITAT RIVER NEAR PITT, WASH.

WATER QUALITY DATA									
	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL, RECOV- ERABLE (UG/L AS ZN)
MAR 9 1980	0	0	0	0	0	0	--	--	30 <3
29...*	0	0	0	0	0	0	--	--	30 <3
30...*	0	0	0	0	0	0	--	--	30 <3
31...*	0	0	0	0	0	0	--	--	20 5
APR									
07...*	0	0	0	0	0	0	--	--	20 <3
MAY									
13...*	0	0	0	0	0	0	--	--	10 5
18...*	0	0	0	0	0	0	--	--	90 4
19...*	0	0	0	0	0	0	--	--	<3 <3
20...*	0	0	0	0	0	0	--	--	20 <3
29...*	0	0	0	0	0	0	35 <6.0	20 <3	<3 <3
JUN									
03...*	0	0	0	0	0	0	34 <6.0	20 <3	<3 <3
09...*	0	0	0	0	0	0	34 <6.0	20 <3	<3 <3
17...*	0	0	0	0	0	0	35 8.0	30 <3	<3 <3
23...*	0	0	0	0	0	0	34 <6.0	50 <3	<3 <3
JUL									
17...*	0	0	0	0	0	0	--	0 0	10 <3
Aug									
13...*	0	0	0	0	0	0	--	--	30 <3
SEP									
17...*	0	0	0	0	0	0	40 <6.0	30 7	20 7

## 14123500 - WHITE SALMON R NR UNDERWOOD, WASH.

## WATER QUALITY DATA

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHRS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	TUH-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS, UH-MF AS (COLS*/100 ML)	ACIDITY (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)		
MAR 1980	28.00	1730	5.2	6.8	6.8	1.8	12.3	--	21	4.9	5.0	2.2	
	29.00	1750	5.2	6.3	6.8	1.5	10.3	--	21	4.9	4.9	2.3	
	30.00	0900	5.6	6.3	6.3	1.7	12.0	--	23	4.9	5.5	2.4	
	31.00	1045	5.3	6.7	6.6	1.4	12.4	--	21	4.9	5.1	2.2	
APR 08.00	0945	5.3	7.0	6.8	1.2	12.2	11	20	4.9	4.9	2.1	3.3	
MAY 14.00	1000	5.3	7.3	9.7	1.2	11.3	21	18	0	4.3	1.9	2.9	
	19.00	0900	6.0	7.9	9.9	3.0	10.2	--	20	0	4.7	2.2	
	20.00	1130	5.3	7.4	9.4	--	10.4	--	--	--	--	--	
	29.00	1845	6.1	7.8	9.6	.90	11.6	--	21	9.9	4.9	2.2	
JUN 11.00	1015	5.4	7.5	9.7	.70	11.0	39	21	--	4.7	2.3	3.2	
POTASSIUM, DIS-SOLVED (MG/L AS K)	DATE	CARBON DIOXIDE (MG/L AS CO <sub>2</sub> )	ALKALINITY (MG/L AS CAC03)	SULFATE DIS-SOLVED (MG/L AS SO <sub>4</sub> )	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO <sub>2</sub> )	SOLID RESIDUE AT 180 DEG C (TONS)	SOLVENTS, DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS (TONS)	SOLIDS, DIS-SOLVED (TONS)	NITROGEN, NO <sub>2</sub> +NO <sub>3</sub> GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (MG/L AS N)	
MAR 1980	28.00	1.2	2.3	5.7	.9	.8	0	28	60	55	.08	.18	
	29.00	1.2	2.2	1.7	1.2	.8	0	28	58	54	.07	.14	
	30.00	1.3	2.5	1.9	1.2	1.1	0	28	65	57	.08	.16	
	31.00	1.2	2.1	6.6	1.0	.8	.0	28	59	54	.08	.14	
APR 08.00	1.1	2.2	3.4	1.6	1.0	1	27	55	54	.07	.13	.11	
MAY 14.00	1.0	2.0	1.5	.5	.8	.1	24	52	47	.07	.09	--	
	19.00	1.1	2.3	*4	2.2	.4	.1	25	52	52	.07	.09	.08
	20.00	--	--	--	--	--	--	--	--	--	--	--	
	29.00	1.2	2.5	.6	.7	.6	.1	27	57	55	.07	.09	.08
JUN 11.00	1.2	2.4	1.2	2.4	.5	.1	25	58	53	.07	.08	.10	

## 14123500 - WHITE SALMON R NR UNDERWOOD, WASH.

WATER QUALITY DATA									
DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AM- DIS- TOTAL SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC DIS- TOTAL SOLVED (MG/L AS N)	NITRO- GEN, NH4 MONIA + ORG. SUSP. ORGANIC TOTAL SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL DIS. TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL DIS. TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL DIS. TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL DIS. TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHOPH- OSPHATE DISSOLV. (MG/L AS P)
MAR 1 1980	.040	.000	.31	.25	.10	.25	.53	.39	.050
28***	.000	.000	.49	.40	.09	.40	.63	.56	.030
29***	.000	.020	.29	.24	.03	.26	.43	.42	.040
30***	.000	.000	.16	.16	.00	.18	.61	.36	.040
31***	.000	.000	.40	.33	.09	.33	.55	.44	--
APR 08***	.020	.000	.40	.42	.09	.33	.55	.44	.040
MAY 14***	.000	.000	.43	.24	.19	.24	.52	--	.030
19***	.080	.100	.22	.23	.00	.23	.23	.24	.040
20***	--	--	--	--	--	--	--	--	--
29***	.010	.040	.24	.16	.25	.05	.20	.34	.030
JUN 11***	.000	.020	.87	.33	.87	.52	.35	.95	.030
MAR 1 1980	150	110	40	--	--	--	1	0	100
28***	140	100	40	--	--	--	1	0	0
29***	140	100	40	--	--	--	1	0	90
30***	160	120	40	--	--	--	0	0	100
31***	--	--	--	--	--	--	0	0	0
APR 08***	130	110	20	--	--	--	0	1	0
MAY 14***	280	250	30	--	--	--	1	0	0
19***	200	170	30	--	--	--	1	0	0
29***	150	140	10	0	0	6	5	1	0
JUN 11***	70	50	20	0	0	0	1	0	0

## 14123500 - WHITE SALMON R NR UNDERWOOD, WASH.

## WATER QUALITY DATA

	BORON*, SUS- PENDED RECOV- ERABLE (UG/L AS B)	CADMIUM, SUS- TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM, SUS- PENDED RECOV- ERABLE (UG/L AS CR)	CHRO- MUM, SUS- TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MUM, SUS- TOTAL RECOV- ERABLE (UG/L AS CR)
MAR * 1980	40 20 40 90 40 50 40 0 2 10 20 10 20 10	0 4 0 0 9 0 0 7 6 0 0 0 0	0 0 0 0 0 0 0 1 1 0 0 0 0	<1 <1 <1 <1 <1 <1 <1 1 <1 -- -- -- --	20 0 0 0 0 0 0 0 0 0 0 0 0
DATE	(UG/L AS BE)	(UG/L AS B)	(UG/L AS CD)	(UG/L AS CR)	(UG/L AS CO)
28***	--	40	40	0	0
29***	--	20	20	0	0
30***	--	40	40	0	0
31***	--	90	90	0	0
APR	--	50	40	0	0
08***	--	50	40	0	0
MAY	--	50	40	0	0
14***	--	2	0	0	0
19***	<1	30	10	0	0
29***	--	30	10	0	0
JUN	--	10	20	0	0
11***	<1	30	10	0	0

	COBALT*, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER*, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	IRON*, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON*, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD*, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD*, SUS- PENDED RECOV- ERABLE (UG/L AS LI)
MAR * 1980	5 3 5 9 6 1 7 2 3 5 3 14 3	1 0 3 1 3 2 2 0 0 3 -- -- 3	200 210 180 290 180 160 260 150 170 90 190 <10	100 110 60 220 80 80 170 80 70 110 190 74 27	5 0 4 5 5 3 5 30 30 0 0 <10	5 0 4 5 5 3 5 30 30 0 0 --
DATE	(UG/L AS CO)	(UG/L AS CU)	(UG/L AS FE)	(UG/L AS PB)	(UG/L AS LI)	
28***	<3	5	4	200	100	5
29***	<3	3	0	210	100	0
30***	<3	5	3	180	120	4
31***	<3	9	6	180	100	30
APR	--	2	2	0	0	0
08***	<3	2	2	0	3	0
MAY	--	9	7	290	70	5
14***	<3	5	3	260	90	5
19***	<3	5	3	150	80	27
29***	<3	14	--	<10	74	--
JUN	--	3	--	<10	190	5
11***	<3	--	--	--	5	0

## 14123500 - WHITE SALMON R NR UNDERWOOD, WASH.

WATER QUALITY DATA									
DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL PENDED RECOV. (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MERCURY TOTAL SOLVED (UG/L AS MN)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L AS NI)
MAR , 1980									
28....	<4	10	1	9	>0	>0	>0	--	1
29....	<4	10	2	8	>0	>0	>0	--	2
30....	<4	10	1	9	>0	>0	>0	--	2
31....	<4	10	2	8	>0	>0	>0	--	2
APR									
08....	<4	0	0	7	>0	>0	>0	--	1
MAY									0
14....	<4	10	2	8	>7	>3	>4	--	3
19....	<4	0	0	10	>7	>6	>1	--	2
29....	<4	10	1	9	>2	>0	>3	<10	17
JUN									
11....	<4	10	1	9	>2	>0	>4	<10	0
								0	0
SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)									
SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)									
MAR , 1980									
28....	0	0	0	0	0	0	0	--	<3
29....	0	0	0	0	0	0	0	--	<3
30....	0	0	0	0	0	0	0	--	10
31....	0	0	0	0	0	0	0	--	6
APR									
08....	0	0	0	0	0	0	0	--	<3
MAY									
14....	0	0	0	0	0	0	0	--	<3
19....	0	0	0	0	0	0	0	--	6
29....	0	0	0	0	0	0	0	--	18
JUN									
11....	0	0	0	0	0	0	0	22	<3

## 14128500 - WIND RIVER NEAR CARSON, WASH.

## WATER QUALITY DATA

DATE	TIME	MICRO- (MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO <sub>3</sub> )	ACIDITY (MG/L AS CACO <sub>3</sub> )	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)
MAR , 1980											
28...	1515	38	6.9	6.4	1.1	13.1	--	1.3	4.9	3.9	.9
30...	1045	35	5.9	5.0	1.4	13.6	--	1.3	4.9	4.0	.9
31...	1315	35	6.2	6.1	.80	13.3	--	1.2	4.9	3.9	.7
APR											
08...	1430	35	6.6	6.7	1.5	13.9	<1	1.3	4.9	3.9	.8
MAY											
14...	1500	45	7.2	9.9	.50	11.5	3	1.4	0	4.1	1.0
20...	0915	44	7.3	9.9	1.8	11.1	--	1.5	0	4.5	1.1
30...	1030	50	7.8	9.0	.70	--	--	1.6	9.9	4.8	1.1
JUN											
04...	1730	46	7.5	11.2	.90	11.3	--	1.6	4.9	4.6	1.2
10...	1715	49	7.6	13.2	.50	10.7	1	1.6	--	4.6	1.3
17...	1430	47	7.4	13.1	1.1	10.5	--	1.6	--	4.6	1.2
24...	1045	53	7.8	11.2	.90	11.2	--	1.7	--	4.8	1.3
JUL											
16...	1030	41	7.9	14.4	.50	10.4	--	1.7	--	5.2	1.2
AUG											
14...	1040	64	7.4	14.0	1.5	10.5	--	1.9	0	5.5	1.5
SEP											
16...	0900	57	7.8	12.0	.10	10.8	--	2.0	0	5.6	1.5
											4.8

## 14128500 - WIND RIVER NEAR CARSON, WASH.

## WATER QUALITY DATA

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO <sub>3</sub> )	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO <sub>2</sub> )	SULFATE DIS- SOLVED (MG/L AS SO <sub>4</sub> )	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO <sub>2</sub> )	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L AS)	SOLIDS, SUM OF CONSTI- TUENTS, DEG. C DIS- SOLVED (TONS PER AC-FT)	SOLIDS, SOLVED (MG/L AS N)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (MG/L AS N)	
					•	•	•	•	•	•	•	
MAR • 1980	28...•	.3	16	3.2	.8	1.2	.0	16	45	35	.6	.02
	30...•	.3	13	2.6	1.0	1.2	.0	16	45	34	.6	.02
	31...•	.3	16	1.6	1.2	1.2	.0	16	39	35	.05	.02
APR	08...•	.3	14	5.5	1.4	1.3	.0	15	38	33	.05	.02
MAY	14...•	.4	16	1.6	1.9	1.9	.1	16	36	37	.04	.03
	20...•	.4	20	1.5	.7	1.7	.1	17	39	41	.05	.04
	30...•	.4	21	.5	1.3	2.0	.1	17	42	42	.05	.01
JUN	04...•	.4	22	1.2	2.2	2.1	.1	17	40	45	.05	.02
	10...•	.4	16	.6	1.3	2.2	.0	17	30	39	.04	.01
	17...•	.4	18	1.1	.4	1.8	.1	17	46	39	.06	.03
	24...•	.4	24	.6	.6	5.3	.1	18	45	48	.06	.02
JUL	16...•	.6	18	.3	1.0	3.2	.1	19	69	45	.09	.07
AUG	14...•	.6	25	1.5	2.6	3.7	.1	21	55	54	.07	.00
SEP	16...•	.7	23	.6	.9	4.1	.1	20	53	52	.07	.00

14128500 - WIND RIVER NEAR CARSON, WASH.

WALTER QUAILITY DATA

## 14128500 - WIND RIVER NEAR CARSON, WASH.

## WATER QUALITY DATA

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV- ERABLE (UG/L AS AL)	ANTI- MONY, SUS- PENDED TOTAL SOLVED (UG/L AS SH)	ANTI- MONY, SUS- PENDED TOTAL SOLVED (UG/L AS SH)	ARSENIC TOTAL SOLVED (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL SOLVED (UG/L AS AS)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)
MAY 28...	1980	150	120	30	--	--	1
30...	180	160	20	--	--	1	0
31...	200	180	20	--	--	1	0
JUN APR	08...	160	140	20	--	0	0
MAY 14...	200	170	30	--	--	1	0
20...	160	140	20	--	--	1	0
30...	180	180	0	0	0	2	0
JUL 04...	120	90	30	0	0	1	0
10...	90	40	50	0	0	1	0
17...	120	110	10	--	--	1	0
24...	100	50	50	--	--	2	0
JUL 16...	150	120	30	--	--	2	0
AUG 14...	140	140	0	--	--	1	0
SEP 16...	70	50	20	--	--	1	0
						100	90
						0	0
						0	9

## 14128500 - WIND RIVER NEAR CARSON, WASH.

WATER QUALITY DATA											
DATE	HERYL-LIUM, AS BE)	HORON, SUS-PENDED RECOV-ERABLE SOLVED (UG/L)	BORON*, DIS-SOLVED RECOV-ERABLE SOLVED (UG/L)	CADMIUM, SUS-TOTAL RECOV-ERABLE SOLVED (UG/L)	CADMIUM, DIS-RECOV-ERABLE SOLVED (UG/L)	CADMIUM, DIS-RECOV-ERABLE SOLVED (UG/L)	CHRO-MIUM, SUS-TOTAL RECOV-ERABLE SOLVED (UG/L)	CHRO-MIUM, SUS-TOTAL RECOV-ERABLE SOLVED (UG/L)	CHRO-MIUM, SUS-TOTAL RECOV-ERABLE SOLVED (UG/L)	COBALT, SUS-PENDED RECOV-ERABLE (UG/L)	
MAR , 1980	<8***	--	50	40	10	0	<1	0	0	0	3
	30***	--	30	20	10	0	<1	0	0	1	0
	31***	--	50	40	10	0	<1	20	0	1	0
APR											
MAY	08***	--	120	110	6	0	<1	0	0	3	0
14***	--	50	30	20	0	--	<1	0	0	0	--
C0***	--	710	680	30	0	--	<1	0	0	0	--
JUN	30***	<1	30	0	30	0	--	<1	0	0	--
04***	<1	40	20	0	--	<1	0	0	0	0	--
10***	<1	60	30	30	0	--	<1	0	0	0	--
17***	<1	40	0	50	0	--	<1	0	0	0	--
24***	<1	30	0	30	0	--	<1	0	0	0	--
JUL											
16***	<1	60	10	50	0	--	<1	10	0	0	--
AUG											
14***	<1	140	10	130	0	--	<1	10	0	1	--
SEP											
16***	<1	80	30	50	0	--	<1	0	0	0	--

## 14128500 - WIND RIVER NEAR CARSON, WASH.

WATER QUALITY DATA									
DATE	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, SUS- PENDED RECov- ERABLE (UG/L AS CU)	COPPER, TOTAL RECov- ERABLE (UG/L AS CU)	IRON, SUS- PENDED RECov- ERABLE (UG/L AS FE)	IRON, TOTAL RECov- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, SUS- PENDED RECov- ERABLE (UG/L AS PB)	LEAD, TOTAL RECov- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDED RECov- ERABLE (UG/L AS LI)
MAR 9 1980									
28***	<3	3	0	4	140	120	20	2	0
30***	<3	2	0	3	110	90	20	0	0
31***	<3	8	6	2	160	140	20	12	0
APR									
06***	<3	3	2	1	110	90	20	4	0
MAY									
14***	<3	5	3	2	210	200	10	3	0
20***	<3	5	4	1	160	150	10	10	0
30***	<3	32	2	30	80	70	12	24	--
JUN									
04***	<3	5	--	<10	90	70	16	5	--
10***	<3	4	--	<10	110	100	10	8	--
17***	<3	3	--	<10	100	90	11	2	0
24***	<3	4	--	<10	120	110	12	0	<10
JUL									
16***	<3	7	--	<10	20	--	<10	7	0
AUG									
14***	<3	4	--	<10	90	--	<10	0	--
SEP									
16***	<3	4	--	<10	70	50	17	2	--

## 14128500 - WIND RIVER NEAR CARSON, WASH.

## WATER QUALITY DATA

	MANGANESE, TOTAL SOLVED (UG/L AS Li)	MANGANESE, PENDED RECOV. (UG/L AS Mn)	MANGANESE, DIS- SOLVED (UG/L AS Mn)	MERCURY TOTAL RECOV- ERABLE (UG/L AS Mn)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS Hg)	MERCURY DIS- SOLVED (UG/L AS Hg)	MOLYB- DENUM, RECov- ERABLE (UG/L AS Mo)	NICKEL, TOTAL RECov- ERABLE (UG/L AS Ni)	NICKEL, SUS- PENDED RECov- ERABLE (UG/L AS Ni)
MAR * 1980	28***	<4	20	2	.0	.0	.0	--	1
	30***	20	20	3	.0	.0	.0	0	0
	31***	<4	10	2	.1	.1	.0	--	2
APR	-	<4	0	0	.0	.0	.0	4	1
MAY	08***	<4	0	3	.0	.0	.0	3	1
	14***	<4	0	2	.5	.1	.4	--	3
	20***	5	10	9	.1	.3	.0	7	6
JUN	30***	<4	0	2	.2	.0	.4	<10	1
	04***	<4	10	8	2	.1	.0	5	2
	10***	<4	10	6	.2	.1	.0	<10	4
	17***	<4	0	0	.1	.0	.1	12	4
JUL	24***	5	30	20	9	.0	.1	0	4
	16***	<4	10	8	2	1.6	.1	<10	3
AUG	14***	<4	0	0	2	.4	.0	<10	0
SEP	16***	5	30	30	3	.2	.0	<10	4

## 14128500 - WIND RIVER NEAR CAHSON, WASH.

DATE	WATER QUALITY DATA						ZINC, TOTAL (UG/L AS ZN)	ZINC, SUS- PENDED (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
	SELE- NIUM, SUS- PENDED (UG/L AS SE)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)			
MAR • 1980	0	0	0	0	0	--	--	10	6
28•••	0	0	0	0	0	--	--	7	4
30•••	0	0	0	0	0	--	--	20	3
31•••	0	0	0	0	0	--	--	20	<3
APR									
08•••	0	0	0	0	0	--	--	40	6
MAY									
14•••	0	0	0	0	0	--	--	20	<3
20•••	0	0	0	0	0	--	--	20	<3
30•••	0	0	0	0	0	16	<6.0	20	10
JUN									
04•••	0	0	0	0	0	17	<6.0	40	<3
10•••	0	0	0	0	0	16	<6.0	30	<3
17•••	0	0	0	0	0	16	<6.0	50	<3
24•••	0	0	0	0	0	17	<6.0	40	<3
JUL									
16•••	0	0	0	0	0	17	<6.0	10	4
AUG									
14•••	0	0	0	0	0	20	<6.0	20	<3
StP									
16•••	0	0	0	0	0	19	<6.0	20	5

WATER QUALITY DATA

SPECIFIC CONDUCTANCE (MICRO-MHOS)	DATE	TIME	FIELD UNITS	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS AS (MG/L)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTASSIUM, DIS-SOLVED (MG/L AS K)		
MAH 1980														
29... 1615				7.5	4.4	2.6	11.8	19	4.4	2.0	7.7	.9		
30... 1140				7.3	4.5	1.7	11.9	18	4.9	1.8	7.8	.9		
APR 18... 1030				7.7	5.8	--	11.8	--	--	--	--	--		
MAY 07... 1100				7.2	6.4	--	11.1	--	--	--	--	--		
JUL 29... 0835				7.0	6.4	66	10.7	19	0	4.6	2.0	8.4	1.2	
MAH 1980														
29... 24				1.2	2.5	5.4	4	27	66	64	.09	.02	.010	
30... 24				1.9	3.2	4.5	4	28	66	65	.09	.02	.010	
APR 18... --				--	--	--	--	--	--	--	--	--	--	
MAY 07... --				--	--	--	--	--	--	--	--	--	--	
JUL 29... 31				4.9	6.0	2.6	5	28	66	72	.09	.06	.010	
MAH 1980														
NITRO-GEN, AMMONIA														
DIS-SOLVED (MG/L AS N)														
DATE														
MAH 1980														
29... .010				.20	.21	.00	.22	.24						
30... .010				.38	.11	.39	.27	.12						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.40	.38	.41	.03	.38						
29... .000				.40	.40	.41	.03	.45						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY 07... --				--	--	--	--	--						
JUL 29... .000				.44	.44	.45	.04	.44						
29... .000				.44	.44	.45	.04	.44						
APR 18... --				--	--	--	--	--						
MAY														

## 14216100 - MUDDY RIVER ABOVE SMITH CREEK NEAR COUGAR, WASH.

## WATER QUALITY DATA

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED DIS- RECOV. (UG/L AS AL)	ALUM- INUM, SUS- PENDED DIS- RECOV. (UG/L AS AS)	ARSENIC ARSENIC TOTAL (UG/L AS AS)	ARSENIC PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	
<b>MAR , 1980</b>											
29...	440	430	10	4	1	3	100	90	10	--	
30...	360	340	20	3	0	4	100	90	10	--	
JUL											
29...	6400	6400	10	4	1	3	100	90	10	<1	
 <b>BORON,</b>											
DATE	BORON, SUS- PENDED TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDED DIS- RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDED DIS- RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	
<b>MAR , 1980</b>											
29...	80	30	50	0	0	<1	20	20	20	0	
30...	100	50	50	0	0	<1	20	20	20	0	
JUL											
29...	110	50	60	0	--	<1	10	0	0	10	
 <b>COBALT,</b>											
DATE	COBALT, SUS- PENDED TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED DIS- RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED DIS- RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	
<b>MAR , 1980</b>											
29...	1	0	<3	2	0	2	140	130	<10		
30...	1	0	<3	3	0	3	90	80	<10		
JUL											
29...	6	--	<3	35	--	<10	6800	--	<10		

## 14216100 - MUDDY RIVER ABOVE SMITH CREEK NEAR COUGAR, WASH.

## WATER QUALITY DATA

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L DATE AS PB)	SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LITHIUM SUS- PENDED RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDED RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
<b>MAR , 1980</b>								
29...	0	0	0	20	0	20	10	6
30...	3	3	0	20	0	20	20	10
<b>JUL</b>								
29...	6	0	<10	20	0	24	130	120
<b>MERCURY</b>								
DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, TOTAL (UG/L AS SE)
<b>MAR , 1980</b>								
29...	.0	.0	.0	--	0	0	2	0
30...	.0	.0	.0	--	0	0	2	0
<b>JUL</b>								
29...	.0	.0	.0	<10	15	14	1	0
<b>SILVER</b>								
DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, RECOV- ERABLE (UG/L AS AG)	STRON- TIUM, SOLVED (UG/L AS AG)	VANA- DIUM, SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS V)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV- ERABLE (UG/L AS ZN)
<b>MAR , 1980</b>								
29...	0	0	0	0	--	--	10	0
30...	0	0	0	0	--	--	10	3
<b>JUL</b>								
29...	0	0	0	0	21	20	70	60

## 14216200 - SMITH CREEK AT MOUTH NEAR COUGAR, WASH.

## WATER QUALITY DATA

DATE	TIME	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS AS CACO <sub>3</sub> )	ACIDITY (MG/L AS CACO <sub>3</sub> )	CALCIUM DIS- SOLVED (MG/L AS CACO <sub>3</sub> )	MAGNE- SIUM, DIS- SOLVED (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
MAR 29 1980	1500	6.9	7.0	5.0	16	12.0	22	4.9	6.9	1.2	3.8
JUN 30 1980	1045	7.0	7.5	4.5	2.8	12.0	21	4.9	6.7	1.1	3.8
APR 18 1980	1115	3.7	7.4	8.0	--	11.9	--	--	--	--	--
MAY 07 1980	1015	3.7	7.7	5.6	--	11.2	--	--	--	--	--
JUL 29 1980	0920	7.31	7.5	13.8	1400	8.8	204	19	60	1.3	76
MAR 29 1980	17	2.7	5.0	5.3	.1	14	50	47	.06	.04	.04
JUN 30 1980	20	1.0	1.7	4.2	.0	15	53	45	.07	.06	.04
APR 18 1980	--	--	--	--	--	--	--	--	--	--	--
MAY 07 1980	--	--	--	--	--	--	--	--	--	--	--
JUL 29 1980	200	10	67	61	.3	28	591	443	.80	.00	.02
MAR 29 1980	010	.010	1.0	.46	1.1	.63	.47	1.1	.51	.070	.020
JUN 30 1980	.30	.030	.34	.27	.37	.07	.30	.43	.34	.030	.010
APR 18 1980	--	--	--	--	--	--	--	--	--	--	--
MAY 07 1980	--	--	--	--	--	--	--	--	--	--	--
JUL 29 1980	.040	.010	2.1	1.2	2.2	.90	1.3	2.2	1.3	2.500	.020

## 14216200 - SMITH CREEK AT MOUTH NEAR COUGAR, WASH.

## WATER QUALITY DATA

ALUM- INUM, TOTAL RECOV- ENABLE DATE	ALUM- INUM, SUS- PENDED RECov. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED RECov. (UG/L AS AL)	ARSENIC ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECov- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)
<b>MAR , 1980</b>									
29...	1900	1900	20	2	0	2	0	0	20
30...	400	380	20	2	0	2	0	0	10
JUL									
29...	11000	11000	30	8	4	4	0	0	50
									<1
<b>BORON,</b>									
BORON, TOTAL RECOV- ERABLE DATE	SUS- PENDED RECov. (UG/L AS B)	BORON, DIS- SOLVED RECov. (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECov- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECov. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	
<b>MAR , 1980</b>									
29...	100	50	50	0	0	<1	0	0	0
30...	100	50	50	0	0	<1	0	0	0
JUL									
29...	330	0	470	0	0	1	20	20	0
<b>COBALT,</b>									
COBALT, TOTAL RECOV- ERABLE DATE	SUS- PENDED RECov. (UG/L AS CO)	COBALT, DIS- SOLVED RECov. (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECov- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECov- ERABLE (UG/L AS FE)		
<b>MAR , 1980</b>									
29...	1	0	<3	6	4	2	1300	1000	290
30...	1	0	<3	3	0	3	550	180	370
JUL									
29...	22	--	<3	150	--	<10	43000	38000	5200

## 14216200 - SMITH CREEK AT MOUTH NEAR COUGAR, WASH.

## WATER QUALITY DATA

DATE	LEAD, AS PB)	SUS- PENDED RECOV- ERABLE (UG/L)	LEAD, AS PB)	LITHIUM TOTAL DIS- RECOV- ERABLE (UG/L)	LITHIUM SUS- PENDED RECOV- ERABLE (UG/L)	LITHIUM TOTAL DIS- RECOV- ERABLE (UG/L)	MANGA- NESE, AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L)	MANGA- NESE, DIS- SOLVED (UG/L)
<b>MAR , 1980</b>									
29...	2	2	0	10	4	6	60	60	4
30...	0	0	0	10	4	6	40	0	40
JUL									
29...	12	0	<10	80	20	58	4700	900	3800
 <b>MERCURY</b>									
DATE	MERCURY AS HG)	SUS- PENDED RECOV- ERABLE (UG/L)	MERCURY AS HG)	MOLYB- DENUM,	NICKEL, AS MO)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L)	NICKEL, AS NI)	SELE- NIUM, AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L)
<b>MAR , 1980</b>									
29...	.0	.0	.0	--	2	0	2	0	0
30...	.0	.0	.0	--	1	0	2	0	0
JUL									
29...	.1	.1	.0	<10	40	37	3	1	1
 <b>SILVER,</b>									
DATE	SELE- NIUM, AS SE)	SILVER, AS AG)	SUS- PENDED RECOV- ERABLE (UG/L)	SILVER, AS AG)	STRON- TIUM, AS SR)	VANA- DIUM, AS V)	ZINC, AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L)	ZINC, DIS- SOLVED (UG/L)
<b>MAR , 1980</b>									
29...	0	0	0	0	--	--	20	20	3
30...	0	0	0	0	--	--	40	30	8
JUL									
29...	0	10	10	0	320	<6.0	130	--	<3

## 14210900 - PINE CREEK AT MOUTH NEAR COUGAR, WASH.

## WATER QUALITY DATA

SPÉ- CIFIC CON- DUCT- ANCE	TIME	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS AS CACO <sub>3</sub> )	ACIDITY (MG/L AS CACO <sub>3</sub> )	CALCIUM DIS- SOLVED (MG/L AS CACO <sub>3</sub> )	MAGNE- SIUM, DIS- SOLVED (MG/L AS CACO <sub>3</sub> )	SODIUM, DIS- SOLVED (MG/L AS CACO <sub>3</sub> )	POTAS- SIUM, DIS- SOLVED (MG/L AS CACO <sub>3</sub> )
DATE	(MICRO- MHOS)	pH FIELD (UNITS)								
MAR 9 1980										
29***	1715	78	7.3	4.6	70	12.5	1.6	4.9	3.8	1.3
30***	0930	79	7.3	4.7	2.1	11.9	1.5	4.9	3.9	1.5
APR 18***	1315	44	7.8	11.0	--	11.8	--	--	--	--
MAY 07***	1300	58	8.0	10.4	--	10.2	--	--	--	--
JUN 06***	1505	113	7.7	9.2	320	11.0	24	9.9	5.8	2.3
JUL 29***	1015	112	7.3	8.9	9.4	10.2	22	--	5.2	2.4
									12	1.9
MAR 9 1980										
29***	21	1.6	3.1	3.7	.2	28	67	61	.09	.02
30***	23	1.8	2.9	3.9	.2	29	68	64	.09	.02
APR 18***	--	--	--	--	--	--	--	--	--	--
MAY 07***	--	--	--	--	--	--	--	--	--	--
JUN 06***	28	.8	8.3	11	.4	35	108	97	.14	.07
JUL 29***	39	3.1	6.3	3.9	.5	40	95	95	.12	.02
									.03	.000
ALKALINITY (MG/L AS CACO <sub>3</sub> )	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO <sub>2</sub> )	SULFATE DIS- SOLVED (MG/L AS SO <sub>4</sub> )	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO <sub>2</sub> )	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L AS SiO <sub>2</sub> )	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (TONS PER MG/L)	SOLID, DIS- SOLVED (TONS PER MG/L)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (MG/L AS N)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (MG/L AS N)
MAR 9 1980										
29***	21	1.6	3.1	3.7	.2	28	67	61	.09	.02
30***	23	1.8	2.9	3.9	.2	29	68	64	.09	.02
APR 18***	--	--	--	--	--	--	--	--	--	--
MAY 07***	--	--	--	--	--	--	--	--	--	--
JUN 06***	28	.8	8.3	11	.4	35	108	97	.14	.07
JUL 29***	39	3.1	6.3	3.9	.5	40	95	95	.12	.02
									.03	.000

## 14216900 - PINE CREEK AT MOUTH NEAR COUGAR, WASH.

## WATER QUALITY DATA

NITRO- GEN, AMMONIA DIS- SOLVED DATE (AS N)	NITRO- GEN, ORGANIC DIS- TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORG. ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4 + SUSP. TOTAL (MG/L AS N)	NITRO- GEN + ORGANIC DIS. TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, SOLVED (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
MAR 1980								
29***	.010	*4.2	*4.0	*4.3	.02	*4.1	*4.5	*4.3
30***	.010	*4.8	--	*4.9	--	--	.52	--
APR	--	--	--	--	--	--	--	--
MAY	--	--	--	--	--	--	--	--
JUN	--	--	--	--	--	--	--	--
JUL	*0.10	*1.4	*3.1	*3.2	*0.0	*3.2	*3.9	*3.4
JUL	*0.00	*5.0	*4.9	*5.0	*0.1	*4.9	*5.2	*5.2
24***	*0.00							

## 14216900 - PINE CREEK AT MOUTH NEAR COUGAR, WASH.

## WATER QUALITY DATA

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV- ERABLE (UG/L AS AL)	ANTI- MONY, ANTI- MONY, DIS- SOLVED TOTAL (UG/L AS SB)	ANTI- MONY, SUS- PENDED TOTAL (UG/L AS SB)	ARSENIC TOTAL SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC TOTAL SUS- PENDED TOTAL (UG/L AS AS)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)
MAR , 1980	140	120	20	--	--	2	0
29...	440	430	10	--	--	2	0
30...						2	0
JUN	910	490	420	0	0	8	5
06...						3	100
JUL	570	560	10	--	--	4	2
29...						2	0

DATE	BARIUM, DIS- SOLVED (UG/L AS BA)	HEXYL- LIUM, DIS- SOLVED (UG/L AS HE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDED RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, SUS- PENDED RECOV- ERABLE (UG/L AS CR)
MAR , 1980	10	--	150	100	50	0	<1
29...	10	--	120	80	40	0	<1
30...						0	20
JUN	8	<1	130	30	100	1	--
06...						<1	0
JUL	8	<1	110	20	90	0	--
29...						<1	10

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
MAR , 1980	0	1	0	<3	3	0	4
29...	0	1	0	<3	4	2	2
30...						170	160
JUN	0	7	--	<3	75	--	10
06...						<10	14000
JUL	10	4	--	<3	17	--	770
29...						<10	680

## 14216900 - PINE CREEK AT MOUTH NEAR COUGAR, WASH.

## WATER QUALITY DATA

	LEAD, TOTAL RECOV- ERABLE (UG/L)	SUS- PENDED RECOV- ERABLE (UG/L)	LITHIUM TOTAL RECOV- ERABLE (UG/L)	LITHIUM SUS- PENDED RECOV- ERABLE (UG/L)	LITHIUM DIS- SOLVED (UG/L)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L)	MANGA- NESE, SUS- PENDED RECOV- ERABLE (UG/L)	MANGA- NESE, DIS- SOLVED (UG/L)	
DATE	AS PB)	AS PB)	AS PB)	AS LI)	AS LI)	AS MN)	AS MN)	AS MN)	
<b>MAR , 1980</b>									
29...	2	2	0	10	0	20	10	7	3
30...	0	0	0	20	0	20	10	8	2
JUN									
06...	8	8	0	40	20	25	390	330	59
JUL									
29...	8	0	<10	30	0	31	60	20	44
 <b>MERCURY</b>									
	MERCURY TOTAL RECOV- ERABLE (UG/L)	SUS- PENDED RECOV- ERABLE (UG/L)	MERCURY DIS- SOLVED (UG/L)	MOLYB- DENUM, SOLVED (UG/L)	NICKEL, TOTAL RECOV- ERABLE (UG/L)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L)	SELE- NIUM, SUS- PENDED RECOV- ERABLE (UG/L)	
DATE	AS HG)	AS HG)	AS HG)	AS MO)	AS NI)	AS NI)	AS SE)	AS SE)	
<b>MAR , 1980</b>									
29...	.1	.1	.0	--	1	0	3	0	0
30...	.0	.0	.0	--	0	0	2	0	0
JUN									
06...	.2	.2	.0	<10	28	28	0	0	0
JUL									
29...	.0	.0	.0	<10	10	7	3	0	0
 <b>SILVER</b>									
	SELE- NIUM, DIS- SOLVED (UG/L)	SILVER, TOTAL RECOV- ERABLE (UG/L)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L)	STRON- TIUM, DIS- SOLVED (UG/L)	VANA- DIUM, DIS- SOLVED (UG/L)	ZINC, TOTAL RECOV- ERABLE (UG/L)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L)	ZINC, DIS- SOLVED (UG/L)	
DATE	AS SE)	AS AG)	AS AG)	AS AG)	AS SR)	AS V)	AS ZN)	AS ZN)	
<b>MAR , 1980</b>									
29...	0	0	0	0	--	--	20	10	7
30...	0	0	0	0	--	--	10	6	4
JUN									
06...	0	0	0	0	38	11	140	--	<3
JUL									
29...	0	0	0	0	36	14	50	--	<3

WATER QUALITY DATA

SPEC- CII-C CON- DUCT- ANCE (MICRO- MHO'S)	TIME	DATE	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CACO <sub>3</sub> )	CALCIUM DIS- SOLVED (MG/L AS CA)	SODIUM, DIS- SOLVED (MG/L AS NA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO <sub>3</sub> )	
			PH FIELD (UNITS)							
APR 1980 23... 0945			7.4	6.6	11	3.4	.7	2.9	.5	15
MAY 0900 28... 0940			7.0	9.2	13	3.8	.9	2.8	.4	16
JUN 0840 24... 0840			7.4	10.0	13	4.0	.8	2.6	.4	17

## 14220500 - LEWIS RIVER AT ARIEL, WASH.

## WATER QUALITY DATA

DATE	TIME	SPECIFIC CONDUCTANCE		PH FIELD	TEMPERATURE, WATER	TURBIDITY	OXYGEN, DISOLVED	COLIFORM,	STREPTOCOCCI	HARDNESS (MG/L AS CACO <sub>3</sub> )	ACIDITY (MG/L AS CACO <sub>3</sub> )
		(MICRO-	MHOS)	(UNITS)	(DEG C)	(NTU)	(MG/L)	(COLS./100 ML)	KF AGAR (COLS./100 ML)		
<b>APR , 1980</b>											
17...	1000	42	6.6		6.1	1.0	12.4	<1	<1	11	--
<b>MAY</b>											
19...	1700	37	7.3		9.4	1.0	11.5	--	--	12	4.9
22...	1045	39	7.2		8.0	--	--	--	--	--	--
28...	1630	31	7.2		9.8	3.4	11.0	--	--	11	.0
<b>JUN</b>											
11...	1100	41	7.3		9.8	2.2	11.1	1	<1	13	4.9
18...	1030	35	7.1		10.4	1.5	10.8	--	--	12	--
25...	1430	37	7.0		10.5	1.2	10.8	5	1	11	--
<b>JUL</b>											
18...	0900	34	7.9		10.6	2.0	10.8	<1	1	12	4.9
<b>AUG</b>											
21...	1030	41	6.8		11.3	2.5	8.8	<1	<1	12	--

DATE	CALCIUM AS CA)	MAGNE-	SODIUM,	POTAS-	ALKALI-	CARBON	SULFATE	CHLO-	FLUO-	SILICA,	
		DIS-	DIS-	SODIUM,	LINITY	DIOXIDE	DIS-	DIS-	RIDE,	DIS-	
	AS MG)	AS MG)	AS NA)	AS K)	(MG/L AS CACO <sub>3</sub> )	SOLVED (MG/L AS CO <sub>2</sub> )	SOLVED (MG/L AS SO <sub>4</sub> )	AS CL)	SOLVED (MG/L AS F)	SOLVED (MG/L AS SiO <sub>2</sub> )	
<b>APR , 1980</b>											
17...	3.3	.8	2.3	.4	14	5.5	4.2	1.0	.1	13	
<b>MAY</b>											
19...	3.5	.9	2.5	.4	12	.9	4.3	4.2	.1	14	
22...	--	--	--	--	--	--	--	--	--	--	
28...	3.5	.5	2.6	.5	15	1.5	1.2	1.1	.0	15	
<b>JUN</b>											
11...	4.0	.8	2.6	.5	25	1.9	.9	1.0	.0	15	
18...	3.6	.8	2.6	.5	7	.8	1.9	1.8	.2	15	
25...	3.3	.7	2.5	.4	17	2.7	1.0	.7	.0	14	
<b>JUL</b>											
18...	3.6	.8	2.6	.5	18	.3	1.0	1.7	.2	15	
<b>AUG</b>											
21...	3.7	.8	2.6	.6	8	2.0	3.7	1.9	.1	14	

14220500 - LEWIS RIVER AT ARIEL, WASH.

WATER QUALITY DATA

	SOLIDS, RESIDUE AT 180 DEG. C SOLVED	SOLIDS, SUM OF CUNSTI- TUENTS, SOLVED	SOLIDS, DIS- GEN, (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
<b>DATE</b>									
APR , 1980									
17...	34	33	.04	.10	.10	.000	.020	.71	.41
MAY									
19...	30	37	.04	.06	.04	.190	.120	.91	.41
22...	--	--	--	--	--	--	--	--	--
28...	30	33	.04	.05	.06	.030	.040	2.3	1.7
JUN									
11...	29	39	.03	.05	.03	.090	.060	.37	.25
18...	40	30	.05	.05	.00	.040	.000	.42	.35
25...	26	32	.03	.00	.00	.000	.000	.84	.37
JUL									
18...	34	36	.04	.02	.02	.000	.000	.89	.53
AUG									
21...	35	32	.04	.01	.03	.010	.000	.30	.29

	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, DIS- TOTAL (MG/L AS N)	NITRO- GEN, DIS- TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC DIS- SUS- PENDED (MG/L AS C)
<b>DATE</b>									
APR , 1980									
17...	.71	.28	.43	.81	.53	.040	.020	1.1	.1
MAY									
19...	1.1	.57	.53	1.1	.57	.070	.000	--	--
22...	--	--	--	--	--	--	--	--	--
28...	2.4	.60	1.8	2.4	1.9	.040	.010	--	--
JUN									
11...	.46	.15	.31	.51	.34	.020	.010	2.2	.2
18...	.46	.11	.35	.51	.35	.010	.010	.8	.1
25...	.84	.47	.37	.84	.37	.050	.030	1.0	--
JUL									
18...	.89	.36	.53	.91	.55	.020	.020	1.4	.1
AUG									
21...	.31	.02	.29	.32	.32	.020	.020	.0	.1

## 14220500 - LEWIS RIVER AT ARIEL, WASH.

WATER QUALITY DATA											
DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV. (UG/L AS AL)	ANTI- MONY, ANTI- MONY, TOTAL SOLVED (UG/L AS SB)	ANTI- MONY, SUS- PENDED TOTAL (UG/L AS SB)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	ARSENIC TOTAL SOLVED (UG/L AS AS)	ARSENIC TOTAL SOLVED (UG/L AS AS)	ARSENIC TOTAL SOLVED (UG/L AS AS)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, TOTAL SOLVED (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)
APR 17...*	--	--	--	--	--	--	--	--	--	--	<2
MAY 19...*	220	190	30	--	--	--	2	1	0	0	0
JUN 28...*	100	40	60	0	0	0	0	2	0	0	0
JUN 11...*	280	260	20	--	--	--	2	0	2	100	90
JUN 18...*	300	250	50	--	--	--	1	0	2	0	0
JUN 25...*	190	160	30	--	--	--	2	1	1	0	0
JUL 18...*	80	60	20	--	--	--	1	0	1	0	0
AUG 21...*	--	--	--	--	--	--	0	0	4	0	0
APR 1980											
MAY 17...*	--	--	--	--	--	0	0	2	0	0	0
MAY 19...*	--	30	30	0	0	0	0	0	0	0	0
JUN 28...*	<1	30	10	20	1	--	<1	0	0	0	4
JUN 11...*	--	30	20	7	0	--	<1	0	0	0	--
JUN 18...*	--	40	10	30	1	0	2	0	0	0	--
JUN 25...*	--	40	10	30	0	--	<1	0	0	0	--
JUL 18...*	<1	20	0	40	0	--	<1	0	0	0	--
AUG 21...*	--	--	--	--	0	--	<1	10	10	0	--

## 14220500 - LEWIS RIVER AT ARIEL, WASH.

## WATER QUALITY DATA

DATE	COPPER, SUS-PENDED RECOVERABLE (UG/L AS CU)		IRON, SUS-PENDED RECOVERABLE (UG/L AS CU)		IRON, TOTAL RECOVERABLE (UG/L AS CU)		IRON, DIS-SOLVED (UG/L AS FE)		LEAD, TOTAL RECOVERABLE (UG/L AS FE)		LEAD, SUS-PENDED RECOVERABLE (UG/L AS PB)		LITHIUM SUS-PENDED RECOVERABLE (UG/L AS LI)	
	COPPER, TOTAL DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, SUS-PENDED RECOVERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)		
APR 9 1980	17.000	<3	5	2	3	80	70	10	9	6	3	--	--	
MAY 19.000	0	6	4	2	130	110	20	8	7	1	0	--		
JUN 28.000	<3	31	--	<10	280	--	<10	20	--	<10	0	--		
JUL 11.000	<3	23	18	5	170	--	<10	22	22	0	0	--		
JUL 18.000	<3	6	4	2	240	190	50	4	2	2	0	--		
JUL 25.000	<3	4	3	1	120	100	20	4	2	2	0	0		
JUL 18.000	<3	11	--	<10	130	--	<10	28	0	36	10	--		
AUG 21.000	<3	10	9	1	130	120	10	23	20	3	--	--		
MANGANESE, LITHIUM DIS-SOLVED (UG/L AS LI)														
APR 9 1980	17.000	--	10	7	3	.1	.1	.0	.0	--	5	4	1	
MAY 19.000	<4	<4	10	3	7	.0	.0	.0	.0	--	3	1	2	
JUN 28.000	<4	<4	10	8	2	.0	.0	.0	<10	4	0	0	5	
JUN 11.000	<4	30	20	10	10	.0	.0	.0	--	13	13	0	0	
JUN 18.000	<4	20	10	10	10	.0	--	--	--	3	0	3	0	
JUL 25.000	6	10	5	5	.1	.1	.0	.0	--	0	0	0	0	
JUL 18.000	<4	20	9	11	.0	.0	.0	.0	<10	2	0	0	3	
AUG 21.000	--	20	20	5	.1	.1	.0	.0	--	2	1	1	1	

## 142200 - LEWIS RIVER AT ARIEL, WASH.

## WATER QUALITY DATA

DATE AS SE)	SELE- NIUM, SUS- PENDED TOTAL SOLVED (UG/L AS SE)	SELE- NIUM, SUS- DIS- TOTAL SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE SOLVED (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE SOLVED (UG/L AS AG)	STRON- TUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, SUS- PENDED RECOV- ERABLE SOLVED (UG/L AS ZN)
APR + 1980	0	0	0	0	0	--	--
17...	0	0	0	0	0	--	--
MAY	0	0	0	0	0	--	--
19...	0	0	0	0	0	<6.0	20
28...	0	0	0	0	0	16	70
JUN	0	0	0	0	0	--	--
11...	0	0	0	0	0	--	90
16...	0	0	0	0	0	--	120
25...	0	0	0	0	0	--	20
JUL	0	0	0	0	1	17	100
18...	0	0	0	0	0	<6.0	10
AUG	0	0	0	0	0	--	50
21...	0	0	0	0	0	--	40

## 14222749 - KALAMA R ABOVE FOSSIL CR NEAR COUGAR, WASH.

## WATER QUALITY DATA

SPE-CIFIC CON-DUC-TANCE (MICRO-MHOS)	TIME	TEMPERATURE, WATER (DEG C)	TUR-BID-ITY (NTU)	HARD-NESS (MG/L AS C)	ACIDITY (MG/L AS C)	CALCIUM SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)			
DATE	MAK * 1980 30...*	1630	.98	.47	.60	10	.49	.30	.7	.35	.6
ALKALINITY (MG/L AS CACO <sub>3</sub> )	CARBON DIOXIDE DI-SOLVED (MG/L AS CO <sub>2</sub> )	SULFATE DI-SOLVED (MG/L AS SO <sub>4</sub> )	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L SiO <sub>2</sub> )	SOLID, RESIDUE AT 180 DEG. C	SOLID, CONSTI-TUENTS, DIS-SOLVED (TONS PER AC-FT)	SOLID, SUM OF SOLIDS, DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (MG/L AS N)		
DATE	MAK * 1980 30...*	18	.96	.9	1.0	.1	21	39	.41	.05	.03
NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC SUSP. TOTAL (MG/L AS N)	NITRO-GEN, NH <sub>4</sub> + ORG. TOTAL (MG/L AS N)	NITRO-GEN, MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, DIS-SOLVED (MG/L AS N)	NITRO-GEN, PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)		
DATE	MAK * 1980 30...*	.010	.29	.28	.30	.01	.29	.33	.32	.060	.060

## 14222749 - KALAMA R ABOVE FOSSIL CR NEAR COUGAR, WASH.

## WATER QUALITY DATA

	ALUM- INUM, TOTAL RECOV- ERABLE DATE	ALUM- INUM, SUS- PENDED RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED RECOV. (UG/L AS AL)	ARSENIC ARSENIC TOTAL (UG/L AS AS)	ARSENIC PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED RECOV- ERABLE (UG/L AS AS)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)
MAR , 1980								
30...	160	140	20	2	0	3	100	90
BORON,	HORON, SUS- PENDED RECOV- ERABLE DATE	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMUM, BORON, DIS- SOLVED ERABLE (UG/L AS B)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV- ERABLE (UG/L AS CR)
MAR , 1980								
30...	50	50	2	0	0	<1	0	0
COBALT,	CUHALT, SUS- PENDED RECOV- ERABLE DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, COBALT, DIS- SOLVED ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
MAR , 1980								
30...	1	0	<3	2	0	3	80	60

## 14222749 - KALAMA R ABOVE FOSSIL CR NEAR COUGAH, WASH.

WATER QUALITY DATA									
	LEAD, TOTAL SUS- PENDED	LEAD, DIS- RECOV- ERABLE (UG/L (UG/L DATE MAR * 1980 30....)	LITHIUM TOTAL RECov- ERABLE SOLVED (UG/L (UG/L AS PB)	LITHIUM SUS- PENDED RECov- ERABLE SOLVED (UG/L (UG/L AS LI)	MANGA- NESE, TOTAL RECov- ERABLE SOLVED (UG/L (UG/L AS MN)	MANGA- NESE, TOTAL RECov- ERABLE SOLVED (UG/L (UG/L AS MN)	MERCURY TOTAL SUS- PENDED RECov- ERABLE SOLVED (UG/L (UG/L AS HG)	MERCURY TOTAL SUS- PENDED RECov- ERABLE SOLVED (UG/L (UG/L AS HG)	MERCURY TOTAL SUS- PENDED RECov- ERABLE SOLVED (UG/L (UG/L AS HG)
NICKEL, TOTAL SUS- PENDED	NICKEL, RECov- ERABLE (UG/L (UG/L DATE MAR * 1980 30....)	SELE- NIUM, TOTAL SOLVED (UG/L (UG/L AS NI)	SELE- NIUM, TOTAL SOLVED (UG/L (UG/L AS SE)	SILVER, TOTAL RECov- ERABLE SOLVED (UG/L (UG/L AS AG)	SILVER, TOTAL RECov- ERABLE SOLVED (UG/L (UG/L AS AG)	SILVER, TOTAL RECov- ERABLE SOLVED (UG/L (UG/L AS AG)	ZINC, TOTAL SUS- PENDED RECov- ERABLE SOLVED (UG/L (UG/L AS ZN)	ZINC, TOTAL SUS- PENDED RECov- ERABLE SOLVED (UG/L (UG/L AS ZN)	ZINC, TOTAL SUS- PENDED RECov- ERABLE SOLVED (UG/L (UG/L AS ZN)

## 14222980 - KALAMA RIVER BELOW FALLS NEAR COUGAR, WASH.

## WATER QUALITY DATA

DATE	TIME	SPE-		COLI-	STREP-	HARD-	ACIDITY			
		CIFIC	CUN-	FORM,	TOCOCCI					
		DUCT-	PH	TEMPER-	TUR-	OXYGEN,	FECAL,	KF AGAR	(MG/L	(MG/L
		ANCE	FIELD	ATURE,	BID-	DIS-	UM-MF	(COLS./	PER	AS
			(MICRO-	WATER	ITY	SOLVED	(MG/L	100 ML)	100 ML)	CACO3)
			MHOS)	(UNITS)	(DEG C)					CACO3)
APR , 1980										
18...	1515		28	7.3	8.5	--	12.4	--	--	--
MAY										
07...	1600		33	--	8.0	--	10.8	--	--	--
21...	1625		47	7.3	7.8	4.4	--	--	--	12 4.9
JUN										
06...	1640		40	7.3	7.0	16	11.2	--	--	11 4.9
11...	1530		46	6.8	7.2	10	11.2	--	--	12 4.9
16...	1430		43	7.1	6.9	30	10.9	--	--	11 4.9
26...	1100		44	7.1	7.0	23	11.2	--	--	13 4.9
JUL										
23...	1600		47	6.5	9.4	2.8	10.4	2	5	13 .0
AUG										
21...	1600		48	6.9	8.0	230	10.3	1	10	13 .0

DATE	CALCIUM (MG/L AS CA)	MAGNE-	SODIUM,	POTAS-	CARBON	CHLO-	FLUO-	SILICA,	
		SIUM, DIS- SOLVED (MG/L AS MG)	DISS- SOLVED (MG/L AS NA)	SIUM, DIS- SOLVED (MG/L AS K)	ALKALI- NITY (MG/L AS CACO3)	DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	RIDE, DIS- SOLVED (MG/L AS CL)	DIS- SOLVED (MG/L AS F)
APR , 1980									
18...	--	--	--	--	--	--	--	--	--
MAY									
07...	--	--	--	--	--	--	--	--	--
21...	3.4	.8	3.5	.5	13	1.0	1.8	2.9	.1 19
JUN									
06...	3.4	.7	3.6	.5	16	1.2	1.4	1.6	.1 19
11...	3.7	.8	3.7	.5	16	4.0	.8	.1 20	
16...	3.3	.8	3.4	.5	13	1.6	.8	5.5	.2 19
26...	3.6	1.0	4.1	.5	26	3.2	2.1	1.1	.1 20
JUL									
23...	3.6	1.1	4.0	.7	16	8.0	6.5	1.6	.3 22
AUG									
21...	3.9	1.0	4.3	.7	16	3.2	3.4	2.1	.2 23

## 14222980 - KALAMA RIVER BELOW FALLS NEAR COUGAR, WASH.

## WATER QUALITY DATA

DATE	SOLIDS, RESIDUE AT 180 DEG. C	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED SOLVED	SOLIDS, DIS- (TONS SOLVED	NITRO- GEN, NO2+NO3 TOTAL PER AC-FT)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
	APR , 1980								
18...	--	--	--	--	--	--	--	--	--
MAY									
07...	--	--	--	--	--	--	--	--	--
21...	42	40	.05	.03	.06	.060	.100	1.6	.36
JUN									
06...	42	40	.05	.03	.01	.040	.010	.24	.24
11...	46	40	.06	.08	.05	.100	.120	1.6	.12
16...	48	41	.06	.00	.01	.000	.000	.47	.28
26...	35	48	.04	.00	.02	.000	.010	.33	.27
JUL									
23...	42	49	.05	.03	.06	.000	.000	.68	.26
AUG									
21...	46	48	.06	.00	.00	.000	.000	.59	.30

## 14222980 - KALAMA RIVER BELOW FALLS NEAR COUGAR, WASH.

## WATER QUALITY DATA

DATE	NITRO- GEN,AM- MONIA + ORGANIC	NITRO- GEN,NH4 + ORG. SUSP.	NITRO- GEN,AM- MONIA + ORGANIC	NITRO- GEN, DIS. TOTAL (MG/L AS N)	NITRO- GEN, DIS- TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)
	APR , 1980								
18...	--	--	--	--	--	--	--	--	--
MAY									
07...	--	--	--	--	--	--	--	--	--
21...	1.7	1.2	.46	1.7	.52	.100	.030	--	--
JUN									
06...	.28	.03	.25	.31	.26	.120	.020	--	--
11...	1.7	1.5	.24	1.7	.29	.050	.020	1.6	--
16...	.47	.19	.28	.47	.29	.170	.020	3.8	.7
26...	.33	.05	.28	.33	.30	.140	.050	.5	--
JUL									
23...	.68	.42	.26	.71	.32	.040	.030	1.4	.8
AUG									
21...	.59	.29	.30	.59	.30	.050	.040	3.0	.1

## 14222980 - KALAMA RIVER BELOW FALLS NEAR COUGAR, WASH.

## WATER QUALITY DATA

DATE	ALUM- INUM, TOTAL ( $\mu\text{g/L}$ )	ALUM- INUM, SUS- PENDED RECOV- ERABLE ( $\mu\text{g/L}$ AS AL)	ANTI- MONY, DIS- SOLVED TOTAL ( $\mu\text{g/L}$ AS SB)	ANTI- MONY, PENDED TOTAL ( $\mu\text{g/L}$ AS SB)	ANTI- MONY, DIS- SOLVED TOTAL ( $\mu\text{g/L}$ AS SB)	ARSENIC SUS- PENDED TOTAL ( $\mu\text{g/L}$ AS AS)	ARSENIC SUS- PENDED TOTAL ( $\mu\text{g/L}$ AS AS)	ARSENIC SUS- PENDED TOTAL ( $\mu\text{g/L}$ AS AS)	BARIUM, SUS- PENDED RECOV- ERABLE ( $\mu\text{g/L}$ AS BA)			
JUN 06...*	100	70	30	0	0	0	2	1	1	0	0	6
11...*	460	380	60	0	0	0	2	0	2	0	0	8
16...*	460	430	30	--	--	--	1	0	2	0	--	<2
26...*	3100	3000	60	--	--	--	2	0	2	0	0	20
JUL 23...*	550	540	10	--	--	--	1	0	1	0	--	<2
AUG 21...*	260	240	20	--	--	--	1	0	1	0	0	10

14222480 - KALAMA RIVER BELOW FALLS NEAR COUGAR, WASH.

## 14222480 - KALAMA RIVER BELOW FALLS NEAR COUGAR, WASH.

## WATER QUALITY DATA

DATE AS SE)	SELF- NIUM, SUS- PENDED	SILVER, NIUM, TOTAL	SILVER, DIS- RECOV- ERABLE	SILVER, DIS- SOLVED	STRON- TUM, DIS- SOLVED	VANA- DIUM, DIS- SOLVED	ZINC, SUS- PENDED
	(UG/L AS SE)	(UG/L AS SE)	(UG/L AS AG)	(UG/L AS AG)	(UG/L AS SR)	(UG/L AS V)	(UG/L AS ZN)
MAY • 1980							
21....	0	0	0	0	13	6.0	30
JUN							<3
06....	0	0	0	0	13	<6.0	60
11....	0	0	0	0	13	<6.0	--
16....	0	0	0	0	12	<6.0	40
26....	0	0	0	0	--	--	30
JUL							6
23....	0	0	0	0	13	8.0	140
AUG							5
21....	0	0	2	2	15	9.0	20
						9	11

## 14240310 - NF TOUTLE R AT OUTFLOW OF SPIRIT LAKE, WASH

## WATER QUALITY DATA

DATE	TIME	SPÉCIFIC CONDUCTANCE (MICRO-MHOS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C.)	DUCT-NESS (MG/L)	TUR-BID-ITY (NTU)	OXYGEN- DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO <sub>3</sub> )	ACIDITY (MG/L AS CACO <sub>3</sub> )	CALCIUM DIS-SOLVED (MG/L AS CACO <sub>3</sub> )	MAGNE-SIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	
MAR 28... 1980	1600	30	7.1	2.6	1.8	11.2	9	4.9	2.8	.6	2.0	.6	
APR 19... 1980	1045	22	7.0	5.0	--	--	--	--	--	--	--	--	
MAY 06... 1980	1045	29	7.0	7.2	--	10.6	--	--	--	--	--	--	
<hr/>													
MAR 28... 1980	9	1.1	.6	1.5	.1	12	33	25	.04	.06	.06	.06	
APR 19... 1980	--	--	--	--	--	--	--	--	--	--	--	--	
MAY 06... 1980	--	--	--	--	--	--	--	--	--	--	--	--	
<hr/>													
MAR 28... 1980	.140	.120	.80	.59	.94	.23	.71	1.0	.77	.030	.020		
APR 19... 1980	--	--	--	--	--	--	--	--	--	--	--	--	
MAY 06... 1980	--	--	--	--	--	--	--	--	--	--	--	--	
<hr/>													
MAR 28... 1980	NITRO-GEN, AMMONIA	NITRO-GEN, DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORG. SUSP. TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS P)	NITRO-GEN, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	
APR 19... 1980	--	--	--	--	--	--	--	--	--	--	--	--	
MAY 06... 1980	--	--	--	--	--	--	--	--	--	--	--	--	

14240310 - NF TOUTLE R AT OUTFLOW OF SPIRIT LAKE, WASH  
WATER QUALITY DATA

	ALUM- INUM,	ALUM- SUS-	ALUM- INUM,	ARSENIC		BARIUM,	SUS-	BARIUM,	
TOTAL	PENDED	DIS-	SOLVED	SUS- ARSENIC	PENDED	ARSENIC	TOTAL	PENDED	
RECOV- ERAHLE	RECOV.	(UG/L)	(UG/L)	TOTAL	TOTAL	SOLVED	RECOV- ERABLE	RECOV- ERABLE	
(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	
DATE	AS AL)	AS AL)	AS AL)	AS AS)	AS AS)	AS AS)	AS BA)	AS BA)	
MAR , 1980									
28...	200	190	10	1	1	0	0	0	10
	BORON,	BORON,	CADMIUM	CADMIUM	CADMIUM	CHRO-	CHRO-	CHRO-	
	SUS-	PENDED	TOTAL	SUS-	PENDED	MIUM,	MIUM,	MIUM,	
	TOTAL	RECOV-	DIS-	RECOV-	RECOV-	TOTAL	SUS-	SUS-	
	RECOV-	ERAHLE	SOLVED	ERABLE	ERABLE	RECOV-	PENDED	DIS-	
	ERAHLE	(UG/L)	(UG/L)	(UG/L)	(UG/L)	ERABLE	RECOV.	SOLVED	
DATE	AS B)	AS B)	AS B)	AS CD)	AS CD)	(UG/L)	(UG/L)	(UG/L)	
						(UG/L)	(UG/L)	(UG/L)	
						AS CR)	AS CR)	AS CR)	
MAR , 1980									
28...	70	70	0	0	0	2	20	20	0
	COHALT,	COHALT,	COPPER,	COPPER,	COPPER,	IRON,	SUS-	IRON,	
	SUS-	PENDED	TOTAL	SUS-	PENDED	TOTAL	PENDED	IRON,	
	TOTAL	RECOV-	DIS-	RECOV-	RECOV-	RECOV-	RECOV-	IRON,	
	RECOV-	ERAHLE	SOLVED	ERABLE	ERABLE	ERABLE	ERABLE	DIS-	
	ERAHLE	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	SOLVED	
DATE	AS CO)	AS CO)	AS CO)	AS CU)	AS CU)	(UG/L)	(UG/L)	(UG/L)	
						AS FE)	AS FE)	AS FE)	
MAR , 1980									
28...	4	1	<3	9	2	7	70	60	<10

## 14240310 - NF TOUTLE R AT OUTFLOW OF SPIRIT LAKE, WASH

WATER QUALITY DATA									
LEAD,		LITHIUM		MANGANESE,		MERCURY		MERCURY	
SUS-	SUS-	TOTAL	SUS-	TOTAL	SUS-	TOTAL	SUS-	PENDED	SUS-
PENDED	PENDED	RECOV-	DIS-	RECOV-	DIS-	RECOV-	DIS-	RECOV-	DIS-
RECOV-	RECOV-	ERABLE	ERABLE	SOLVED	ERABLE	SOLVED	ERABLE	ERABLE	SOLVED
ERABLE	ERABLE	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
(UG/L)	(UG/L)	(AS PB)	(AS LI)	(AS LI)	(AS LI)	(AS MN)	(AS MN)	(AS HG)	(AS HG)
MAR • 1980	28....	19	19	0	0	<4	20	10	6
								.1	.1
									.0
NICKEL,	NICKEL,	SELENIUM,	SELENIUM,	SILVER,	SILVER,	SILVER,	SILVER,	ZINC,	ZINC,
SUS-	SUS-	SUS-	SUS-	SUS-	SUS-	SUS-	SUS-	SUS-	SUS-
PENDED	PENDED	NIKEL,	NIKEL,	PENDED	PENDED	PENDED	PENDED	PENDED	PENDED
RECOV-	RECOV-	DIS-	DIS-	RECOV-	RECOV-	RECOV-	RECOV-	RECOV-	RECOV-
ERABLE	ERABLE	SOLVED	TOTAL	SOLVED	ERABLE	SOLVED	ERABLE	ERABLE	SOLVED
(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
(AS NI)	(AS NI)	(AS SE)	(AS SE)	(AS SE)	(AS AG)	(AS AG)	(AS AG)	(AS ZN)	(AS ZN)
MAR • 1980	28....	1	0	4	0	0	0	0	0

## 14240350 - COLDWATER CREEK NEAR SPIRIT LAKE, WASH.

## WATER QUALITY DATA

SP <sub>T</sub> - CIFIC CON- DUCT- ANCE (MICRO- MHO <sub>S</sub> )	TIME DATE	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L) AS CACO <sub>3</sub> )	ACIDITY (MG/L) AS CACO <sub>3</sub> )	CALCIUM DIS- SOLVED (MG/L) AS CACO <sub>3</sub> )	MAGNE- SIUM, DIS- SOLVED (MG/L) AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K)
JUN , 1980 06... JUL 28...	1400 463 1340	34.5 7.0 7.0	6.9 25.2 40	8.9 7.8 7.8	730 10.2 146	98 19 14	19 31 43	5.1 24 9.2	5.4 6.2	
ALKALI- NITY (MG/L) AS CACO <sub>3</sub> )	CARBON DIOXIDE DIS- SOLVED (MG/L) AS CO <sub>2</sub> )	SULFATE DIS- SOLVED (MG/L) AS SO <sub>4</sub> )	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F)	SILICA, DIS- SOLVED (MG/L) AS SiO <sub>2</sub> )	SOLIDS, RESIQUE AT 180 DEG. C SOLVED (MG/L) AS SiO <sub>2</sub> )	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (TONS PER (MG/L)	SOLIDS, DIS- SOLVED (MG/L) AS N)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (MG/L) AS N)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> AMMONIA TOTAL (MG/L) AS N)
JUN , 1980 06... JUL 28...	31 75	6.2 11	6.2 82	35 52	.2 .2	14 18	249 400	197 303	.33 .54	.01 .01
NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N)	NITRU- GEN, ORGANIC TOTAL (MG/L) AS N)	NITRO- GEN, AM- MONIA + ORG. ORGANIC TOTAL (MG/L) AS N)	NITRO- GEN, NH <sub>4</sub> + MONIA + ORGANIC TOTAL (MG/L) AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L) AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L) AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L) AS N)	PHOS- PHORUS, TOTAL (MG/L) AS P)	PHOS- PHORUS, TOTAL (MG/L) AS P)	CARBON, ORGANIC SUS- PENDED (MG/L) AS C)	CARBON, ORGANIC SUS- PENDED (MG/L) AS C)
JUN , 1980 06... JUL 28...	.110 .000	.68 .85	.21 .67	1.0 .85	.68 .18	.32 .67	1.0 .86	.33 .67	.020 .020	-- 5.2

## 14240350 - COLDWATER CREEK NEAR SPIRIT LAKE, WASH.

## WATER QUALITY DATA

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED DIS- RECOV. (UG/L AS AL)	ALUM- INUM, SOLVED (UG/L AS SB)	ANTI- MONY, TOTAL (UG/L AS SB)	ANTI- SUS- PENDED DIS- SOLVED (UG/L AS SB)	ANTI- MONY, TOTAL (UG/L AS SB)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)
JUN , 1980										
06...	910	850	60	0	0	0	14	11	3	100
JUL										
28...	7100	7100	50	--	--	--	20	9	11	100
DATE	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BERYL- LIUM, SOLVED (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDED RECOV- ERABLE (UG/L AS B)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
JUN , 1980										
06...	80	20	<1	100	60	40	0	<1	10	10
JUL										
28...	70	30	<1	150	0	220	0	<1	10	0
DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
JUN , 1980										
06...	0	23	--	<3	75	<10	41000	41000	370	
JUL										
28...	10	14	8	6	35	<10	19000	14000	4700	

## 14240350 - COLDWATER CREEK NEAR SPIRIT LAKE, WASH.

## WATER QUALITY DATA

DATE	LEAD,		LITHIUM		MANGANESE,		MANGANESE,		MANGANESE,	
	PENDED	SUSPENDED	TOTAL	PENDED	LITHIUM	TOTAL	SUSPENDED	PENDED	RECOV.	SOLVED
JUN , 1980										
06...	20	--	<10	50	30	21	2300	900	1400	
JUL										
28...	13	0	<10	30	5	25	3400	300	3100	
<hr/>										
DATE	MERCURY		MERCURY		MOLYB-	NICKEL,	NICKEL,		SELE-	
	PENDED	SUSPENDED	RECOV-	DIS-	DENUM,	TOTAL	PENDED	RECOV-	DIS-	NIUM,
JUN , 1980										
06...	.1	.1	.0	<10	65	59	6	1	1	
JUL										
28...	.1	.1	.0	<10	19	16	3	0	0	
<hr/>										
DATE	SELENIUM,		SILVER,		STRON-		VANA-	ZINC,	ZINC,	ZINC,
	TOTAL	SUSPENDED	RECOV-	DIS-	TIUM,	DIS-	DIUM,	TOTAL	PENDED	DIS-
JUN , 1980										
06...	0	0	0	0	140	<6.0	120	--	<3	
JUL										
28...	0	7	7	0	210	<6.0	60	60	5	

## 14240440 - CASTLE CR TWO MILES ABV MOUTH NR SPIKET LK, WA

## WATER QUALITY DATA

SPe- CIFIC CON- DUCT- ANCE (MICRO- MHO)	TIME DATE	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, SOLVED (MG/L)	HARD- NESS (MG/L AS CACO <sub>3</sub> )	ACIDITY (MG/L AS CACO <sub>3</sub> )	CALCIUM SOLVED (MG/L AS CACO <sub>3</sub> )	MAGNE- SIUM, SOLVED (MG/L AS Mg)	SODIUM, SOLVED (MG/L AS Na)	POTAS- SIUM, SOLVED (MG/L AS K)
JUL 29... 1980	1400	109	7.4	22.4	10	7.0	32	.0	8.9	2.5	8.6
ALKALI- T.ITY (MG/L AS AS CACO <sub>3</sub> )	DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO <sub>2</sub> )	SULFATE DIS- SOLVED (MG/L AS SO <sub>4</sub> )	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO <sub>2</sub> )	SOLID, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L AS SiO <sub>2</sub> )	SOLID, SUM OF CONSTI- TUENTS, DIS- SOLVED (TONS PER AC-FT)	SOLID, DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> AMMONIA TOTAL (MG/L AS N)
JUL 29... 1980	34	2.1	17	4.0	.3	34	101	101	.13	.00	.00
NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORG. ORGANIC SUSP. TOTAL (MG/L AS N)	NITRO- GEN NH <sub>4</sub> + ORG. ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORG. ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL DIS. TOTAL (MG/L AS N)	NITRO- GEN, TOTAL DIS. TOTAL (MG/L AS N)	NITRO- GEN, TOTAL DIS. TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL SOLVED (MG/L AS P)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)
JUL 29... 1980	.010	.67	.46	.67	.20	.47	.67	.47	.160	.070	7.7

## 14240440 - CASTLE CR TWO MILES ABV MOUTH NR SPIRIT LK, WA

## WATER QUALITY DATA

ALUM- INUM, TOTAL RECOV- ERABLE DATE	ALUM- INUM, SUS- PENDED RECov. AS AL)	ALUM- INUM, DIS- RECov. AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECov- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECov. AS BA)
JUL , 1980 29... .	310	290	20	1	0	2	0
BERYL- BARIUM, DIS- SOLVED DATE	LIUM, TOTAL RECov. ERABLE (UG/L AS BE)	HORON, SUS- PENDED RECov. ERABLE (UG/L AS B)	HORON, DIS- RECov. ERABLE (UG/L AS B)	CADMIUM TOTAL RECov- ERABLE (UG/L AS CD)	CADMIUM TOTAL RECov- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECov- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECov. RECOV. (UG/L AS CR)
JUL , 1980 29... .	10	<1	70	30	40	0	<1
CHRO- MIUM, DIS- SOLVED DATE	COBALT, TOTAL RECov. ERABLE (UG/L AS CO)	COHALT, DIS- SOLVED ERABLE (UG/L AS CO)	COPPER, TOTAL RECov- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED ERABLE (UG/L AS CU)	IRON, TOTAL RECov- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECov- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
JUL , 1980 29... .	0	4	<3	13	<10	4200	2300
LEAD, TOTAL RECOV- ERABLE DATE	SUS- PENDED RECov. ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED ERABLE (UG/L AS PB)	LITHIUM TOTAL RECov- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDED RECov- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECov- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECov. RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JUL , 1980 29... .	6	0	<10	20	0	22	460
MERCURY TOTAL RECOV- ERABLE DATE	SUS- PENDED RECov. ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED ERABLE (UG/L AS HG)	MOLYB- DENUM, SOLVED ERABLE (UG/L AS MO)	NICKEL, TOTAL RECov- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDED RECov- ERABLE (UG/L AS NI)	SELE- NIUM, DIS- SOLVED ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)
JUL , 1980 29... .	.0	.0	.0	<10	20	16	4
SELE- NIUM, DIS- SOLVED DATE	SILVER, TOTAL RECov- ERABLE (UG/L AS SE)	SUS- PENDED RECov- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED ERABLE (UG/L AS AG)	STRON- TIUM, DIS- SOLVED ERABLE (UG/L AS SR)	VANA- DIUM, DIS- SOLVED ERABLE (UG/L AS V)	ZINC, TOTAL RECov- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
JUL , 1980 29... .	0	4	4	0	42	<6.0	10

WATER QUALITY DATA

## 14240460 - NF TOUTLE R BELOW ELK CR NR SPIRIT LAKE, WASH

## WATER QUALITY DATA

	ALUM- INUM, TOTAL RECOV- ERABLE DATE	ALUM- INUM, SUS- PENDED DIS- RECOV. (UG/L AS AL)	ALUM- INUM, SUS- PENDED DIS- RECOV. (UG/L AS AL)	ARSENIC ARSENIC TOTAL SOLVED (UG/L AS AS)	SUS- PENDED TOTAL RECOV- ERABLE (UG/L AS AS)	ARSENIC ARSENIC TOTAL SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)
MAR , 1980									
28...	200	180	20	2	1	1	100	90	10
BORON,	BORON, SUS- PENDED	BORON, DIS- RECOV- ERABLE (UG/L AS B)	CADMUM SUS- PENDED	CADMUM TOTAL RECOV- ERABLE (UG/L AS CU)	CADMUM SUS- PENDED	CADMUM DIS- RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)
DATE	AS B)	AS B)	AS B)	AS CU)	AS CD)	AS CR)			
MAR , 1980									
28...	110	70	40	0	0	1	20	20	0
COBALT,	COBALT, SUS- PENDED	COBALT, DIS- RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED	COPPER, DIS- RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
DATE	AS CO)	AS CO)	AS CO)	AS CU)	AS CU)	AS CU)			
MAR , 1980									
28...	1	0	<3	10	7	3	170	140	30

## 14240460 - NF TOUTLE R BELOW ELK CR NR SPIRIT LAKE, WASH

WATER QUALITY DATA									
LEAD, SUS-PENDED					MANGANESE, SUS-PENDED				
LEAD, TOTAL	LITHIUM TOTAL	LITHIUM SUS-PENDED	LITHIUM DIS-COV-ERABLE	MANGANESE, TOTAL	MANGANESE, TOTAL	MANGANESE, DIS-PENDED	MERCURY, TOTAL	MERCURY, DIS-PENDED	MERCURY, SUS-PENDED
RECOV- ERABLE	SOLVED	SOLVED	SOLVED	RECOV- ERABLE	RECOV- ERABLE	RECOV- ERABLE	RECOV- ERABLE	RECOV- ERABLE	RECOV- ERABLE
(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
(AS PB)	(AS PB)	(AS LI)	(AS LI)	(AS MN)	(AS MN)	(AS AG)	(AS ZN)	(AS ZN)	(AS HG)
MAR * 1980 28... .	3	0	10	0	10	20	10	7	.1
									.0
NICKEL, SUS-PENDED	NICKEL, SUS-PENDED	SELENIUM, SUS-PENDED	SELENIUM, SUS-PENDED	SILVER, SILVER, SUS-PENDED	SILVER, SILVER, SUS-PENDED	SILVER, SILVER, SUS-PENDED	ZINC, ZINC, SUS-PENDED	ZINC, ZINC, SUS-PENDED	ZINC, ZINC, SUS-PENDED
TOTAL	RECOV- ERABLE	TOTAL	TOTAL	RECOV- ERABLE	RECOV- ERABLE	RECOV- ERABLE	RECOV- ERABLE	RECOV- ERABLE	RECOV- ERABLE
RECOV- ERABLE	(UG/L)	SOLVED	SOLVED	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
(UG/L)	(UG/L)	(UG/L)	(UG/L)	(AS SE)	(AS SE)	(AS SE)	(AS AG)	(AS AG)	(AS ZN)
(AS NI)	(AS NI)	(AS NI)	(AS NI)						
MAR * 1980 28... .	8	5	3	0	0	0	0	0	30
									10

14241000 - GREEN R NR TOUTLE, WASH.

## WATER QUALITY DATA

## 14241100 - N.F. TOUTLE RIVER AT KID VALLEY, WASH.

## WATER QUALITY DATA

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHRS)	PH FIELD (UNITS)	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS (MG/L AS CACO <sub>3</sub> )	ACIDITY (MG/L AS CACO <sub>3</sub> )	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)
JUN , 1980										
06...	1030	225	7.5	8.9	400	--	66	9.9	20	4.0
19...	1710	200	--	19.4	--	--	57	--	17	3.7
JUL										
30...	1145	175	7.3	17.0	33	9.0	51	4.9	15	3.5

SODIUM, DIS-SOLVED (MG/L AS NA)	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY (CACO <sub>3</sub> )	CARBON DIOXIDE (AS CO <sub>2</sub> )	SULFATE (AS SO <sub>4</sub> )	CHLORIDE, DIS-SOLVED (AS CL)	FLUORIDE, DIS-SOLVED (AS F)	SILICA, SOLVED (SiO <sub>2</sub> )	SOLID RESIDUE AT 180 DEG. C
<b>JUN , 1980</b>								
06...	16	2.6	25	1.2	45	24	.1	16
19...	13	--	--	--	--	--	--	16
JUL								
30...	12	1.8	34	2.7	34	15	.2	20
								121

SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, NITROGEN, NO <sub>2</sub> +NO <sub>3</sub> (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, NO <sub>2</sub> +NO <sub>3</sub> (MG/L AS N)	NITROGEN, AMMONIA (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, AMMONIA (MG/L AS N)	NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
<b>JUN , 1980</b>								
06...	144	.21	.02	.00	.160	.010	.52	.23
19...	--	--	--	.08	--	.940	--	.46
JUL								
30...	123	.16	.01	.01	.000	.000	.64	.33
								.64

NITROGEN, NH <sub>4</sub> + ORG. SUSP. TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, DIS-SOLVED (MG/L AS N)	NITROGEN, PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	PHOSPHORUS, ORTHOPHOSPHATE DISSOLVED (MG/L AS P)	PHOSPHORUS, CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED (MG/L AS C)
<b>JUN , 1980</b>							
06...	.44	.24	.70	.24	1.400	.010	--
19...	--	1.4	--	1.5	--	1.500	2.100
JUL							
30...	.31	.33	.65	.34	.320	.020	--
							2.7
							3.5

## 14241100 - N.F. TOUTLE RIVER AT KID VALLEY, WASH.

## WATER QUALITY DATA

	ALUM- INUM, TOTAL RECOV- ERABLE DATE	ALUM- INUM, SUS- PENDED RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED RECOV. (UG/L AS AL)	ANTI- MONY, TOTAL (UG/L AS SB)	ANTI- MONY, TOTAL (UG/L AS SB)	ANTI- MONY, TOTAL (UG/L AS SB)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)
JUN , 1980										
06...	910	800	110	0	0	0	5	3	2	100
19...	--	--	--	--	--	--	--	--	1	--
JUL										
30...	1100	1100	30	--	--	--	4	1	3	100
	BARIUM, SUS- PENDED RECOV- ERABLE DATE	BARIUM, AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV- ERABLE RECDV. (UG/L AS CR)
JUN , 1980										
06...	90	10	<1	80	40	40	0	<1	10	10
19...	--	20	<1	--	--	--	--	1	--	--
JUL										
30...	80	20	<1	70	20	50	0	<1	10	10
	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
JUN , 1980										
06...	0	9	--	<3	50	<10	17000	17000	150	
19...	--	--	--	<3	--	<10	--	--	260	
JUL										
30...	0	5	1	4	20	<10	5200	4500	720	

## 14241100 - N.F. TOUTLE RIVER AT KID VALLEY, WASH.

## WATER QUALITY DATA

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L)	SUS- PENDED RECOV- ERABLE (UG/L)	LEAD, TOTAL RECOV- ERABLE (UG/L)	LITHIUM SUS- PENDED RECOV- ERABLE (UG/L)	LITHIUM SUS- PENDED RECOV- ERABLE (UG/L)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L)	MANGA- NESE, SUS- PENDED RECOV. (UG/L)	MANGA- NESE, DIS- PENDED RECOV. (UG/L)
	AS PB)	AS PB)	AS PB)	AS LI)	AS LI)	AS MN)	AS MN)	AS MN)
<b>JUN , 1980</b>								
06...	5	5	0	20	10	10	970	410
19...	--	--	45	--	--	7	--	--
<b>JUL</b>								
30...	9	0	<10	0	0	6	470	80
<b>MERCURY</b>								
DATE	MERCURY TOTAL RECOV- ERABLE (UG/L)	SUS- PENDED RECOV- ERABLE (UG/L)	MERCURY DIS- SOLVED (UG/L)	MOLYB- DENUM, SOLVED (UG/L)	NICKEL, TOTAL RECOV- ERABLE (UG/L)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L)	SELE- NIUM, SUS- PENDED TOTAL (UG/L)	SELE- NIUM, SUS- PENDED TOTAL (UG/L)
	AS HG)	AS HG)	AS HG)	AS MO)	AS NI)	AS NI)	AS SE)	AS SE)
<b>JUN , 1980</b>								
06...	.2	.2	.0	<10	22	19	3	0
19...	--	--	.0	<10	--	--	--	--
<b>JUL</b>								
30...	.0	.0	.0	<10	10	7	3	0
<b>SILVER,</b>								
DATE	SELE- NIUM, DIS- SOLVED (UG/L)	SILVER, TOTAL RECOV- ERABLE (UG/L)	SILVER, DIS- ERABLE (UG/L)	STRON- TIUM, SOLVED (UG/L)	VANA- DIUM, SOLVED (UG/L)	ZINC, TOTAL RECOV- ERABLE (UG/L)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L)	ZINC, DIS- SOLVED (UG/L)
	AS SE)	AS AG)	AS AG)	AS AG)	AS SR)	AS V)	AS ZN)	AS ZN)
<b>JUN , 1980</b>								
06...	0	0	0	0	110	<6.0	210	--
19...	0	--	--	--	93	<6.0	--	--
<b>JUL</b>								
30...	0	0	0	0	84	<6.0	70	70
								3

## WATER QUALITY DATA

DATE	TIME	PH (MICRO- MOHS)	FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO <sub>3</sub> )	CALCIUM DIS- SOLVED (MG/L AS CACO <sub>3</sub> )	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	
MAR 29... 1980	0830	4.7	7.8	3.7	1.5	12.3	14	4.9	4.1	1.0	3.2	.6
APR 19... 1980	0800	3.2	8.1	8.4	--	11.3	--	--	--	--	--	--
MAY 06... 1980	1500	4.5	7.7	9.6	--	10.1	--	--	--	--	--	--
JUN 06... 1980	1550	9.2	7.6	8.9	21	10.8	23	4.9	6.8	1.6	7.6	1.6

DATE	CARBON DIOXIDE (MG/L AS CO <sub>2</sub> )	SULFATE DIS- SOLVED (MG/L AS SO <sub>4</sub> )	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO <sub>2</sub> )	SOLIDS, RESIDUE AT 180 DEG. C	SOLIDS, CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, SUM OF SOLIDS, RESIDUE AT 180 DEG. C TONS PER AC-FT)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL SOLVED (MG/L AS N)		
MAR 29... 1980	19	.4	1.6	2.1	.1	19	45	43	.06	.06	.06
APR 19... 1980	--	--	--	--	--	--	--	--	--	--	--
MAY 06... 1980	--	--	--	--	--	--	--	--	--	--	--
JUN 06... 1980	25	.9	5.9	6.1	.1	23	76	68	.10	.01	.02

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH <sub>4</sub> + ORG. SUSP. TOTAL DIS. (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL DIS. (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL DIS. (MG/L AS N)	NITRO- GEN, TOTAL DIS. (MG/L AS N)	NITRO- GEN, TOTAL SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	
MAR 29... 1980	.010	.010	.25	.25	.00	.26	.32	.030	.020	
APR 19... 1980	--	--	--	--	--	--	--	--	--	
MAY 06... 1980	--	--	--	--	--	--	--	--	--	
JUN 06... 1980	.010	.010	.28	.25	.06	.26	.33	.28	.080	.010

## 14241460 - SF TOUTLE R BLW DISAPPNTMNT CR NR SPIRIT LK, WA

## WATER QUALITY DATA

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- PENDED RECOV. (UG/L AS AL)	ANTI- MONY, TOTAL SOLVED (UG/L AS SH)	ANTI- MONY, PENDED TOTAL (UG/L AS SH)	ARSENIC SUS- PENDED TOTAL (UG/L AS SH)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	BARIUM, TOTAL DIS- SOLVED (UG/L AS BA)	BARIUM, TOTAL DIS- SOLVED (UG/L AS BA)
MAR * 1980								
29...*	510	480	30	--	--	0	0	200
JUN	100	60	40	0	0	2	1	0
06...*								0

DATE	METHYL- LUM. DIS- SOLVED (UG/L AS BE)	HORON, TOTAL RECOV- ERABLE (UG/L AS B)	HORON, SUS- PENDED RECOV- ERABLE (UG/L AS B)	HORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CU)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CR)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CR)
MAR * 1980								
29...*	10	--	90	70	20	0	<1	0
JUN	8	<1	50	0	70	0	--	0
06...*								0

DATE	CHRO- MUM. DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
MAR * 1980								
29...*	0	1	0	<3	4	0	6	560
JUN	0	1	--	<3	8	--	<10	1200
06...*								460

14241460 - SF TOUTLE R BLW DISAPPNTMENT CR NR SPIRIT LK, WA

## WATER QUALITY DATA

	LEAD, LEAD, TOTAL RECOV- ERABLE (UG/L DATE	SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	SUS- PENDED RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- .NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED RECOV. (UG/L AS MN)
<b>MAR , 1980</b>									
29...	54	54	0	0	0	5	30	10	20
JUN									
06...	6	6	0	10	2	8	150	40	110

	MERCURY			NICKEL,			SELE-		
MERCURY	SUS-	MERCURY	MOLYB-	NICKEL,	SUS-	NICKEL,	SUS-	NIUM,	
TOTAL	PENDED	RECOV-	DIS-	DENUM,	TOTAL	PENDED	RECOV-	NIUM,	
RECUV-	RECOV-	ERABLE	ERABLE	SOLVED	ERABLE	ERABLE	DIS-	PENDED	
ERABLE	ERABLE	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	SOLVED	TOTAL	
(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L	
DATE	AS HG)	AS HG)	AS HG)	AS MO)	AS NI)	AS NI)	(UG/L	AS SE)	
MAR , 1980									
29...	.1	.1	.0	--	0	0	2	0	0
JUN									
06...	-1	1	-0	<10	6	6	0	0	0

	SILVER,				ZINC,				
SELE- NIUM, DIS- SOLVED (UG/L DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS SE)	SUS- PENDED RECOV- ERABLE (UG/L AS AG)	STRON- SILVER, DIS- SOLVED (UG/L AS AG)	VANA- TIUM, DIS- SOLVED (UG/L AS SR)	ZINC, DIUM, DIS- SOLVED (UG/L AS V)	SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIUM, DIS- SOLVED (UG/L AS ZN)		
MAR + 1980	0	0	0	0	--	--	20	20	4
29...	0	0	0	0	--	--	20	20	4
JUN									
06...	0	0	0	0	33	56.0	250	--	<3

## 14241500 - SOUTH FORK TOUTLE RIVER AT TOUTLE, WASH.

## WATER QUALITY DATA

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC DUCT- ANCE (MICRO- MHOS)	CON- FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
JUL , 1980 30...	1045	120	100	7.2	14.8	1200	10.0	31	4.9	8.8
MAGNE- SIUM, DIS- SOLVED DATE	SODIUM, DIS- SOLVED (MG/L AS MG)	POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LINITY (MG/L AS K)	CARBON DIOXIDE (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS CO2)	CHLO- RIDE, DIS- SOLVED (MG/L AS SO4)	FLUO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS F)	SOLIDs, RESIDUE AT 180 DEG. C	
JUL , 1980 30...	2.3	7.3	1.5	26	2.6	8.2	11	.3	23	78
SOLIUS, SUM OF CONSTI- TUENTS, DIS- SOLVED DATE	SOLIDs, DIS- SOLVED (MG/L AC-FT)	SOLIDs, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	
JUL , 1980 30...	78	.10	25.2	.02	.04	.020	.000	2.0	.39	
NITRO- GEN, AM- MONIA + ORGANIC TOTAL DATE	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC SOLVED (MG/L AS P)	CARBON, DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)	
JUL , 1980 30...	2.1	1.7	.39	2.1	.43	6.000	.040	20	3.3	

14241500 - SOUTH FORK TOUTLE RIVER AT TOUTLE, WASH.

## WATER QUALITY DATA

## 14242690 - TOUTLE R AT HIWAY 99 BRIDGE NR CASTLE ROCK, WA.

## WATER QUALITY DATA

DATE	TIME	SPECIFIC CONDUCTANCE		PH FIELD	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISOLVED (MG/L)	COLIFORM, FORM, FECAL, KF AGAR (COLS./100 ML)	STREPTOCOCCI, FECAL, PER 100 ML)	HARDNESS (MG/L AS CACO3)
		STREAM FLOW, INSTANTANEOUS (CFS)	DUCTANCE (MICRO-MHOS)					(COLS./100 ML)	PER 100 ML)	
<b>MAR , 1980</b>										
29...	1100	1950	49	7.8	7.5	20	12.0	--	--	14
APR										
19...	1330	2820	35	7.8	10.9	--	--	--	--	--
MAY										
06...	1645	1910	59	7.8	11.6	--	10.7	--	--	--
20...	1000	--	560	7.2	15.0	5600	--	--	--	141
22...	1230	760	310	7.3	11.4	--	--	--	--	174
25...	1630	--	254	7.4	10.8	500	--	--	--	64
27...	1600	--	290	7.3	11.4	1700	--	--	--	74
29...	1500	930	228	7.5	12.6	820	--	--	--	63
JUN										
05...	1300	--	174	7.4	11.3	880	9.8	--	--	50
10...	1315	--	165	7.3	14.8	820	6.7	--	--	47
19...	1215	800	171	7.5	15.8	660	9.0	--	--	47
24...	1430	--	155	7.4	16.0	370	9.2	K6200	27	45
JUL										
22...	1100	--	147	7.4	21.4	--	8.2	K56	220	44
AUG										
20...	1045	--	150	7.4	16.5	650	11.6	K220	K44	46

DATE	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTASSIUM, DIS-SOLVED (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)
<b>MAR , 1980</b>										
29...	4.9	3.8	1.2	3.6	.5	14	.3	1.0	7.2	.1
APR										
19...	--	--	--	--	--	--	--	--	--	--
MAY										
06...	--	--	--	--	--	--	--	--	--	--
20...	19	43	8.1	49	8.0	39	3.9	140	54	.3
22...	--	40	18	24	5.5	--	--	--	--	--
25...	9.9	19	4.0	17	3.8	--	--	50	24	.0
27...	9.9	22	4.6	19	3.9	24	1.9	64	27	.2
29...	4.9	19	3.9	15	2.9	18	.9	54	18	.1
JUN										
05...	9.9	15	3.1	12	2.3	21	1.3	33	21	.2
10...	9.9	14	3.0	11	2.1	16	1.2	27	27	.1
19...	--	14	3.1	11	2.0	19	.9	25	14	.2
24...	4.9	13	3.1	9.7	1.8	33	2.0	25	7.7	.1
JUL										
22...	4.9	13	3.0	11	2.4	20	1.2	19	25	.2
AUG										
20...	9.9	13	3.4	10	1.9	32	2.0	22	11	.2

## 14242690 - TOUTLE R AT HIWAY 99 BRIDGE NR CASTLE ROCK, WA.

## WATER QUALITY DATA

SILICA, DIS- SOLVED (MG/L AS DATE	SOLIDS, RESIDUE AT 180 DIS- SOLVED (MG/L SI02)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- (TONS AC-FT)	SOLIDS, DIS- (TONS PER DAY)	NITRO- GEN, NO2+N03 (MG/L AS N)	NITRO- GEN, NO2+N03 (MG/L AS N)	NITRO- GEN, AMMONIA (MG/L AS N)	NITRO- GEN, AMMONIA (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
<b>MAR , 1980</b>										
29... APR	16	45	42	.06	237	.25	.16	.030	.010	.29
19... MAY	--	--	--	--	--	--	--	--	--	--
06... 20... 22... 22... 25... 27... 29...	-- 22 45 18 15 18	-- 386 350 -- 159 185 149	-- .52 .21 .25 .20	-- -- -- -- 374	-- .02 .00 .09 .06	-- .06 .07 .10 .03	-- .090 .000 .490 .310	-- .060 .000 .490 .010	-- .060 10 -- 1.3 2.7 2.3	
JUN										
05... 10... 19... 24... 22... 21	16 17 17 18	128 112 115 98 115	.17 .15 .15 .13 .15	-- -- 248	.02 .07 .00 .00 .00	.01 .10 .00 .00 .01	.300 .250 .110 .150 .020	.010 .100 .000 .020 .030	.90 1.1 .66 .64 .57	
JUL										
AUG										
20... 22...	22	108	103	.14	--	.00	.07	.120	.000	.53

NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + DIS- ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, DIS- TOTAL (MG/L AS N)	NITRO- GEN, DIS- TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, DIS- SOLVED (MG/L AS P)	CARBON, DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)
<b>MAR , 1980</b>										
29... APR	--	.32	--	--	.57	--	.020	.020	--	--
19... MAY	--	--	--	--	--	--	--	--	--	--
06... 20... 22... 22... 25... 27... 29...	-- .27 11 1.3 2.1 2.6	-- 11 .62 1.0 3.2 2.7	-- .33 .68 2.2 2.2 .77	-- 11 1.3 3.2 2.3 2.7	-- .39 .75 2.3 6.400 2.7	3.600 -- -- 1.500 --	.020 -- -- .010 --	-- -- -- -- --	-- -- -- -- --	-- -- -- -- --
JUN										
05... 10... 19... 24... 22... 21	.29 .15 .67 .75	1.2 1.4 .77 .79	.90 1.2 .10 .02	.30 .25 .67 .77	1.2 1.4 .77 .79	.31 .35 .67 1.300	.100 .200 .100 .040	-- 7.8 3.1 3.6	-- 11 2.4 --	-- -- --
JUL										
AUG										
20... 22...	.37	.65	.28	.37	.65	.44	.020	.040	8.4	1.3

WATER QUALITY DATA									
DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV- ERABLE (UG/L AS AL)	ANTI- MONY, INUM, TOTAL SOLVED (UG/L AS AL)	ANTI- MONY, SUS- PENDED TOTAL (UG/L AS SB)	ANTI- MONY, DIS- PENDED TOTAL (UG/L AS SB)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)
MAR 1 1980	200	160	40	--	--	2	1	1	90
MAY 29***	20000	20000	310	--	--	6	5	1	10
MAY 20***	55000	54000	700	--	--	14	10	100	20
MAY 22***	33000	32000	540	--	--	13	11	200	90
MAY 25***	57000	57000	250	0	0	13	11	200	10
MAY 27***	34000	34000	270	0	0	8	6	100	10
JUN 05***	65000	65000	110	0	0	8	5	3	100
JUL 10***	85000	85000	100	0	0	7	5	200	10
JUL 19***	20000	20000	40	--	--	5	3	100	4
JUL 24***	100000	100000	140	--	--	4	2	0	10
JUL 22***	16000	16000	50	--	--	7	5	200	10
AUG 20***	18000	18000	150	--	--	5	2	3	100
<hr/>									
MAR 1 1980	--	80	30	50	0	<1	0	0	0
MAY 29***	<1	190	0	210	0	1	0	0	7
MAY 20***	<1	130	40	90	0	3	20	20	17
MAY 22***	<1	130	50	80	0	0	0	0	29
MAY 25***	<1	120	30	90	0	7	0	0	20
MAY 27***	<1	90	20	70	0	<1	30	30	25
MAY 29***	<1	80	30	50	1	<1	10	10	27
JUN 05***	<1	70	20	50	0	<1	10	0	--
JUL 19***	<1	80	10	70	1	<1	40	40	--
JUL 24***	--	90	20	70	0	<1	10	0	--
JUL 22***	<1	100	10	90	0	<1	10	0	--
AUG 20***	<1	120	10	110	1	<1	30	30	7

## 14242640 - TOUTLE R AT HIWAY 99 BRIDGE NR CASTLE ROCK, WA.

## WATER QUALITY DATA

DATE	COBALT, SOLVED (UG/L AS CO)	COPPER, SUS- PENDED RECOVER- ABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOVER- ABLE (UG/L AS FE)	IRON, SUS- PENDED RECOVER- ABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOVER- ABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOVER- ABLE (UG/L AS PB)	LITHIUM, SUS- PENDED RECOVER- ABLE (UG/L AS LI)		
MAR * 1980	<3	6	1	5	230	160	70	10	0	0	
MAY	<3	110	--	<10	22000	22000	95	3	<10	30	
20...	12	490	340	150	76000	76000	21	1.9	--	4	
22...	<3	320	310	11	50000	50000	160	1.6	--	30	
25...	<3	380	--	<10	78000	78000	110	27	<10	30	
27...	<3	250	--	<10	41000	41000	65	22	--	60	
29...	<3	180	--	<10	32000	32000	110	22	<10	40	
JUN	<3	190	--	<10	40000	40000	140	1.7	5	30	
10...	<3	110	--	<10	33000	33000	240	9	0	0	
19...	<3	83	80	3	19000	19000	210	7	5	3	
24...	<3	450	--	<10	37000	37000	120	1.6	--	40	
JUL	<3	130	--	<10	16000	16000	160	1.8	0	40	
22...	<3	130	--	<10	16000	16000	160	1.8	<10	20	
20...	<3	130	--	<10	16000	16000	160	1.8	--	--	
<hr/>											
DATE	LITHIUM, DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOVER- ABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOVER- ABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY, TOTAL RECOVER- ABLE (UG/L AS HG)	MERCURY, SUS- PENDED RECOVER- ABLE (UG/L AS HG)	MERCURY, DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL, RECOVER- ABLE (UG/L AS NI)	NICKEL, SUS- PENDED RECOVER- ABLE (UG/L AS NI)	
MAR , 1980	29...	<4	20	0	20	.0	.0	.0	--	8	6
MAY	20...	26	1300	300	1000	.1	.1	.0	11	14	2
22...	29	2200	1000	1200	.1	.0	.3	<10	57	37	10
25...	10	1400	1100	350	.1	.1	.0	<10	40	28	20
27...	12	2000	1500	490	.1	.1	.0	<10	74	71	12
29...	12	1300	900	400	.1	.1	.0	<10	20	13	3
JUN	05...	7	1100	720	380	.1	.1	.0	<10	60	0
10...	6	1100	780	320	.1	.1	.0	<10	63	61	2
19...	7	270	0	290	.0	.0	.0	<10	31	29	2
24...	7	680	390	290	.1	.1	.0	--	32	32	0
JUL	22...	4	960	730	230	.1	.1	.0	<10	35	31
AUG	<4	600	410	190	.2	.2	.0	<10	24	22	2
20...	<4	600	410	190	.2	.2	.0	<10	24	22	2

## 14242690 - TOUTLE R AT HIWAY 99 BRIDGE NR CASTLE ROCK, WA.

## WATER QUALITY DATA

DATE	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)	SILVER, SILVER, TOTAL, RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)
			SILVER, SILVER, TOTAL, RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL, RECOV- ERABLE (UG/L AS ZN)
MAR 29 1960	0	0	0	0	0	--	30
MAY 20	0	0	0	0	0	<6.0	70
22	2	2	0	0	0	200	230
25	1	1	0	0	0	99	160
27	1	1	0	0	0	120	140
29	1	1	0	0	0	98	150
JUN 05	0	0	0	0	0	78	200
10	0	0	0	0	0	69	190
19	0	0	0	0	0	67	400
24	0	0	0	0	0	--	390
JUL 22	0	0	1	1	0	67	70
AUG 20	0	0	2	2	0	72	--
						<6.0	130
						150	130
							16

14242700 - TOUTLE R NR CASTLE ROCK, WASH.

WATER QUALITY DATA

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE TIME	(MICRO- MHOS)	FIELD (UNITS)	TEMPER- ATURE, PH (DEG C)	WATER (AS N)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (MG/L)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHOPH PHORUS, OSPHATE TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH PHORUS, OSPHATE DISSOL. (MG/L AS P)
APR , 1980										
MAY 22...	1450	36	7.5	9.0	.19	.080	.030	.010		
MAY 27...	1350	290	7.4	10.0	.01	.430	5.400	.020		
JUN 23...	1355	150	7.7	15.6	.03	.040	.730	.010		

## 14243000 - COWLITZ R AT CASTLE ROCK, WASH.

## WATER QUALITY DATA

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)
<b>MAY , 1980</b>										
20...	0815	6200	136	7.4	11.5	2300	--	--	--	40
20...	1530	6200	131	7.4	11.8	1900	--	--	--	31
21...	0830	8060	99	7.4	9.8	1000	--	--	--	28
21...	1200	--	77	7.4	9.8	770	--	--	--	29
22...	1030	--	76	7.4	9.4	--	--	--	--	--
22...	1600	7920	110	7.3	9.8	2700	--	--	--	30
23...	1530	9140	71	7.4	9.8	380	5.6	--	--	22
25...	1300	8200	79	7.1	9.6	550	--	--	--	24
27...	1030	9950	104	7.3	8.7	470	--	--	--	30
29...	1030	7220	80	7.4	10.4	250	6.8	--	--	23
<b>JUN</b>										
04...	1100	--	92	7.3	11.9	390	10.8	--	--	26
10...	1000	--	72	7.1	10.8	--	--	--	--	--
17...	1130	--	89	7.3	10.5	1100	10.1	K5100	K210	28
24...	1330	--	60	7.0	11.1	64	10.7	730	--	21
<b>JUL</b>										
22...	1600	--	66	6.8	--	600	9.2	K18	K11	22
<b>AUG</b>										
19...	1130	--	83	7.2	13.3	13	10.6	K31	<6	26

DATE	ACIDITY (MG/L AS CACO3)	CALCIUM (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
<b>MAY , 1980</b>										
20...	4.9	12	2.6	1.3	5.4	21	1.3	34	11	.2
20...	4.9	9.4	2.0	8.5	1.6	21	1.3	20	8.4	.1
21...	4.9	8.5	1.8	7.0	1.3	21	1.3	14	6.1	.1
21...	4.9	8.5	2.0	6.7	1.4	15	.9	15	6.5	.1
22...	--	--	--	--	--	--	--	--	--	--
22...	4.9	9.2	1.9	7.1	1.3	24	1.9	15	6.7	.1
23...	4.9	6.7	1.3	3.8	.7	21	1.3	3.6	3.0	.1
25...	4.9	7.1	1.6	4.7	1.0	23	2.9	7.5	5.1	.1
27...	4.9	9.3	1.7	5.9	1.2	21	1.6	20	8.8	.1
29...	9.9	7.3	1.3	4.5	.9	21	1.3	9.6	5.0	.1
<b>JUN</b>										
04...	9.9	8.0	1.5	5.3	.9	16	1.2	11	5.7	.1
10...	--	--	--	--	--	--	--	--	--	--
17...	--	8.7	1.6	5.0	.9	25	1.9	12	4.8	.2
24...	4.9	6.5	1.3	3.5	.5	18	2.8	7.3	1.8	.0
<b>JUL</b>										
22...	.0	6.9	1.3	4.3	.7	23	5.7	4.3	3.9	.2
<b>AUG</b>										
19...	9.9	7.9	1.7	5.7	.9	16	1.6	7.7	7.1	.1

14243000 - COWLITZ R AT CASTLE ROCK, WASH.

## WATER QUALITY DATA

	SILICA, DIS- SOLVED DATE	SOLIDS, RESIDUE SI02)	SOLIDS, SUM OF DEG. C	SOLIDS, CONSTIT- TUENTS,	SOLIDS, DIS- SOLVED DIS- SOLVED	NITRO- GEN, NO2+N03	NITRO- GEN, TOTAL	NITRO- GEN, AMMONIA	NITRO- GEN, AMMONIA	NITRO- GEN, DIS- SOLVED	NITRO- GEN, TOTAL
	(MG/L AS SI02)	(MG/L)	(MG/L)	(AC-FT)	(TONS PER DAY)	(MG/L AS N)	(MG/L AS N)	(MG/L AS N)	(MG/L AS N)	(MG/L AS N)	(MG/L AS N)
<b>MAY , 1980</b>											
20...	15	106	106	.14	1774	.01	.02	.750	.040	.85	
20...	15	70	78	.10	1272	.01	.01	.570	.030	.73	
21...	15	69	66	.09	1502	.01	.01	.450	.030	.55	
21...	14	92	63	.12	--	.04	.04	.160	.190	.84	
22...	--	--	--	--	--	--	--	--	--	--	
22...	15	80	71	.10	1711	.03	--	.060	.040	1.7	
23...	14	54	46	.07	1333	.04	.08	.100	.070	.46	
25...	14	59	55	.08	1306	.03	.07	.040	.060	.96	
27...	14	73	73	.09	1961	.10	.10	.180	.010	2.7	
29...	14	62	55	.08	1209	.15	.08	.120	.010	1.9	
<b>JUN</b>											
04...	14	67	56	.09	--	.06	.06	.190	.010	.25	
10...	--	--	--	--	--	--	--	--	--	--	
17...	14	72	62	.09	--	.07	.07	.120	.000	1.5	
24...	14	42	45	.05	--	.09	.03	.020	.000	.33	
<b>JUL</b>											
22...	14	50	49	.06	--	.05	.05	.020	.060	.36	
<b>AUG</b>											
19...	14	59	55	.08	--	.00	.02	.000	.000	.17	

	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L DATE	NITRO- GEN, AM- MONIA + DIS- ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, DIS- TOTAL (MG/L AS N)	NITRO- GEN, PHORUS, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, DIS- SOLVED (MG/L AS C)	CARBON, SUS- PENDED (MG/L AS C)
	(AS N)	(AS N)	(AS N)	(AS N)	(AS N)	(AS N)	(AS P)	(AS P)	(AS C)	(AS C)
<b>MAY , 1980</b>										
20...	.34	1.6	1.2	.38	1.6	.40	6.700	.010	--	--
20...	.39	1.3	.88	.42	1.3	.43	5.800	.000	--	--
21...	.35	1.0	.62	.38	1.0	.39	3.800	.000	--	--
21...	.09	1.0	.72	.28	1.0	.32	.740	.340	--	--
22...	--	--	--	--	--	--	--	--	--	--
22...	.53	1.8	1.2	.57	1.8	--	6.900	.020	--	--
23...	.69	.56	.00	.76	.60	.84	1.500	.020	--	--
25...	.56	1.0	.38	.62	1.0	.69	1.600	.010	--	--
27...	2.3	2.9	.50	2.4	3.0	2.5	1.900	.010	--	--
29...	.40	2.1	1.7	.41	2.2	.49	.760	.010	--	--
<b>JUN</b>										
04...	.20	.44	.23	.21	.50	.27	.800	.010	--	--
10...	--	--	--	--	--	--	--	--	--	--
17...	.37	1.7	1.3	.37	1.7	.44	2.600	.010	2.4	15
24...	.27	.35	.08	.27	.44	.30	.390	.000	--	--
<b>JUL</b>										
22...	.24	.38	.08	.30	.43	.35	.420	.000	1.6	1.2
<b>AUG</b>										
19...	.15	.17	.02	.15	.17	.17	.520	.020	4.6	1.4

## 14243000 - COWLITZ R AT CASTLE ROCK, WASH.

## WATER QUALITY DATA

DATE	ALUM- INUM, TOTAL HECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV. (UG/L AS AL)	ANTI- MONY, SUS- PENDED TOTAL (UG/L AS SB)	ANTI- MONY, DIS- SOLVED TOTAL (UG/L AS SH)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, TOTAL, RECOV- ERABLE (UG/L AS BA)	BARIUM, TOTAL, RECOV- ERABLE (UG/L AS BA)
MAY 1980	20***	20***	50	50	--	--	18	16	2
20***	11000	11000	90	90	--	--	12	10	2
21***	13000	13000	70	70	--	--	10	8	2
21***	5100	4900	220	0	0	0	6	5	1
22***	1600	1400	170	170	--	--	0	3	2
23***	--	--	170	0	0	0	3	2	0
23***	11000	11000	270	0	0	0	4	3	1
25***	16000	16000	90	0	0	0	6	4	2
27***	16000	16000	90	0	0	0	6	4	2
29***	17000	17000	100	0	0	0	3	1	2
JUN									
04***	5500	5400	130	0	0	0	4	2	2
17***	17000	17000	70	--	--	--	4	2	2
24***	6700	6700	50	--	--	--	2	0	0
JUL									
22***	7400	7400	50	--	--	--	3	1	2
AUG									
19***	9900	9800	100	--	--	--	2	0	5
MAY 1980									0
20***								0	0
20***									10
21***									<2
21***									10
22***									2
23***									3
23***									3
25***									10
25***									<3
27***									4
27***									<3
29***									7
JUN									<3
04***									51
17***									25
24***									24
JUL									<3
22***									3
AUG									10
19***									<3

## 14243000 - COWLITZ R AT CASTLE ROCK, WASH.

## WATER QUALITY DATA

DATE	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)			IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)			LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)			LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS LI)		
			TOTAL	DIS- SOLVED	(UG/L AS CU)	TOTAL	DIS- SOLVED	(UG/L AS FE)	TOTAL	DIS- SOLVED	(UG/L AS PB)	TOTAL	DIS- SOLVED	(UG/L AS LI)
MAY , 1980														
20...	520	510	6	98000	98000	70	37	37	0	80	70	70	40	30
20...	330	330	4	58000	58000	70	24	22	2	30	--	--	--	--
21...	310	310	4	44000	44000	50	38	37	1	30	--	--	--	--
21...	150	--	<10	16000	16000	67	6	--	<10	10	5	5	5	5
22...	50	--	<10	9700	9600	84	4	--	<10	10	5	5	5	5
23...	120	--	<10	16000	16000	73	8	--	<10	10	5	5	5	5
25...	47	--	<10	8500	8400	110	4	--	<10	0	0	0	0	0
27...	100	--	<10	20000	20000	40	22	--	<10	20	--	--	--	--
29...	56	--	<10	8300	8300	25	12	--	<10	10	--	--	--	--
JUN														
04...	67	--	<10	12000	12000	63	11	--	<10	10	--	--	--	--
17...	100	--	<10	54000	54000	80	9	0	10	20	20	20	20	20
24...	33	30	3	7600	7600	50	7	4	3	10	6	6	6	6
JUL														
22...	56	--	<10	4600	4600	49	4	0	10	10	5	5	5	5
AUG														
19...	70	--	<10	8000	8000	48	35	0	42	10	--	--	--	--
MANGANESE,														
LITHIUM, DIS- SOLVED (UG/L AS LI)														
DATE	MANGANESE, SUS- PENDED RECOV- ERABLE (UG/L AS MN)	LITHIUM, DIS- SOLVED (UG/L AS LI)	MANGANESE, SUS- PENDED RECOV. (UG/L AS MN)	MERCURY, TOTAL, DIS- SOLVED (UG/L AS MN)	MERCURY, TOTAL, DIS- SOLVED (UG/L AS HG)	MERCURY, TOTAL, DIS- SOLVED (UG/L AS HG)	MERCURY, TOTAL, DIS- SOLVED (UG/L AS MO)	MERCURY, TOTAL, DIS- SOLVED (UG/L AS NI)	MOLYB- DENUM., DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL, DIS- SOLVED (UG/L AS NI)	NICKEL, TOTAL, DIS- SOLVED (UG/L AS NI)	NICKEL, TOTAL, DIS- SOLVED (UG/L AS NI)	NICKEL, TOTAL, DIS- SOLVED (UG/L AS NI)	
MAY , 1980														
20...	7	2300	2100	.1	.1	.1	.0	.0	--	81	75	6	3	
20...	6	1400	1200	.1	.1	.1	.0	.0	--	38	35	3	3	
21...	<4	1200	1100	.1	.1	.1	.0	.0	--	51	47	4	4	
21...	5	500	420	.77	.1	.1	.0	.0	<10	12	5	7	7	
22...	5	320	260	.65	.1	.1	.0	.0	<10	9	3	6	6	
23...	5	490	460	.34	.0	.0	.3	.3	<10	14	6	8	8	
25...	6	240	190	.53	.1	.0	.2	.2	<10	11	2	9	9	
27...	<4	550	430	.120	.1	.1	.0	.0	<10	24	21	3	3	
29...	<4	240	160	.77	.0	.0	.0	.0	<10	16	13	3	3	
JUN														
04...	<4	340	240	100	.1	.1	.0	.0	<10	28	27	1	1	
17...	4	1100	980	120	.50	.2	.0	.0	<10	73	69	4	4	
24...	4	170	120	.50	.2	.0	.0	.0	<10	190	190	0	0	
JUL														
22...	5	50	20	.34	.1	.1	.0	.0	<10	44	40	4	4	
AUG										<10	26	24	2	2
19...	<4	280	170	110	.0	.0	.0	.0	<10	26	24	2	2	

## 14243000 - COWLITZ R AT CASTLE ROCK, WASH.

WATER QUALITY DATA							
	SILVER, SUS- PENDED TOTAL DIS- SOLVED (UG/L AS SE)	SILVER, SUS- PENDED TOTAL RECov- ERABLE (UG/L AS AG)	SILVER, RECov- ERABLE (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL, RECov- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECov- ERABLE (UG/L AS ZN)
MAY , 1980							
20...	1	1	0	0	0	--	6
20...	1	1	0	0	0	--	9
21...	1	1	0	0	0	--	<3
21...	0	0	0	0	0	<6.0	<3
22...	0	0	0	0	0	<6.0	<3
23...	0	0	0	0	0	26	<3
23...	0	0	0	0	0	31	<3
25...	0	0	0	0	0	<6.0	<3
27...	0	0	0	0	0	36	<3
29...	0	0	0	0	0	29	<6.0
JUN							
04...	0	0	0	0	0	34	5
17...	1	1	0	0	0	35	<3
24...	0	0	0	0	0	--	4
JUL							
22...	0	0	0	0	0	<3.0	<3
AUG							
19...	0	0	0	0	0	34	3
						230	3

114244200 - COWLITZ RIVER AT KELSO, WASH.

WATER QUALITY DATA

SPE- CIFIC CON- DUCT- ANCE (MICRO- MHO'S)	STREAM- FLOW, INSTAN- TANEOUS (CF's)	TIME	DATE	STREP- TOCOCCI	COLI- FORM,	FECAL,	KF AGAR	HARD- NESS	ACIDITY
				TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	(COLS./ 100 ML)	(MG/L AS CACO3)	(MG/L AS CACO3)
PH 9, 1980									
16... 1400	10100			44	6.7	9.4	3.7	11.2	2
AY									16
20... 1325	--	178	7.3	13.3	--	--	--	--	--
30... 1230	6570	78	7.4	10.9	17.0	--	--	24	4.9
UN									
04... 1400	--	82	7.5	12.6	--	--	--	--	--
12... 1230	6740	73	7.4	11.4	72	10.6	2100	--	26
17... 1600	7790	98	7.4	12.3	65.0	8.9	3100	K150	29
25... 1100	6200	65	7.5	13.4	18.0	10.4	700	K20	21
UL									
23... 1030	3220	73	7.2	15.6	28.0	9.2	38	<6	25
U6									.0
19... 1115	--	87	7.4	15.4	2.3	10.2	--	--	27
									--
MAGNE- SIUM, DIS- SOLVED (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	SODIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLU- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
APR • 1980									
16... 4.5	1.2	2.9	.5	19	6.0	.8	2.2	.1	13
MAY	--	--	--	--	--	--	--	--	--
20... 30... 30... 30... JUN	1.5	1.4	4.9	.9	21	1.3	9.2	4.9	1.1
04... 04... 04... 04... 04... JUN	--	--	--	--	--	--	--	--	--
12... 12... 12... 12... 12... JUN	8.0	1.5	4.5	.8	48	3.0	5.8	4.3	.1
17... 17... 17... 17... 17... JUN	9.0	1.8	5.7	.8	21	1.3	14	6.3	.1
25... 25... 25... 25... 25... JUL	6.4	1.4	3.7	.5	18	.9	8.1	1.6	.0
JUL									
23... 23... 23... 23... 23... AUG	7.5	1.7	4.5	.7	18	1.8	7.6	4.3	.2
19... 19... 19... 19... 19... AUG	8.3	1.7	6.3	.9	16	1.0	15	8.2	.0

## 14244200 - COWLITZ RIVER AT KELSO, WASH.

## WATER QUALITY DATA

DATE	SOLIDS, RESIDUE AT 180 DEG. C	SOLIDS, SUM OF CONSTITU- ENTS,	SOLIDS, DIS- SOLVED DIS- SOLVED SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C,	SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 (MG/L AS N)	NITRO- GEN, NO2+NO3 (MG/L AS N)	NITRO- GEN, AMMONIA (MG/L AS N)	NITRO- GEN, AMMONIA (MG/L AS N)	NITRO- GEN, ORGANIC (MG/L AS N)
APR , 1980												
16...	42	36	.05		1145	9	.19	.20	.000	.020	.44	
MAY												
20...	--	--	--		--	--	--	--	--	--	--	
30...	61	55	.08		1082	--	.08	.08	.100	.010	1.7	
JUN												
04...	--	--	--		--	--	--	--	--	--	--	
12...	55	69	.07		1001	--	.10	.05	.030	.000	.75	
17...	62	64	.08		1304	--	.11	.12	.040	.000	1.6	
25...	42	45	.05		703	--	.00	.05	.040	.030	.44	
JUL												
23...	50	51	.06		435	--	.11	.07	.010	.000	.32	
AUG												
19...	71	64	.09		--	198	.09	.00	.100	.000	.43	

DATE	NITRO- GEN, ORGANIC SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + DIS- ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NH4- MUNIA + + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N)	NITRO- GEN, DIS. TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	
APR , 1980											
16...	.31	.44	.11	.33	.63	.53	.020	.010	2.1	.3	
MAY											
20...	--	--	--	--	--	--	--	--	--	--	
30...	1.9	1.8	.00	2.0	1.8	2.1	.920	.010	--	--	
JUN											
04...	--	--	--	--	--	--	--	--	--	--	
12...	.75	.78	.03	.75	.88	.80	.660	.010	14	2.8	
17...	.38	1.7	1.3	.38	1.8	.50	.210	.070	2.4	8.9	
25...	.21	.48	.24	.24	.48	.29	.540	.030	--	--	
JUL											
23...	.24	.33	.09	.24	.44	.31	.400	.010	2.2	2.4	
AUG											
19...	.39	.53	.14	.39	.62	.39	.940	.070	10	1.2	

14244200 - COWLITZ RIVER AT KELSO, WASH.

WATER QUALITY DATA

APK		1980		APK		1980		APK		1980		APK		1980	
DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, SUS- PENDED RECOV- ERABLE (UG/L AS AL)	ANTI- MONY, SUS- PENDED TOTAL SOLVED (UG/L AS SB)	ANTI- MONY, SUS- PENDED TOTAL (UG/L AS SB)	ANTI- MONY, SUS- PENDED TOTAL (UG/L AS SB)	ARSENIC TOTAL SOLVED (UG/L AS AS)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)						
MAY 30....	29000	29000	120	0	0	--	--	1	1	0	0	--	--	--	<2
JUN 12....	10000	9400	80	--	--	--	--	4	2	2	10	0	0	10	10
JUN 17....	39000	39000	20	--	--	--	--	7	5	2	100	90	100	0	0
JUL 25....	10000	9900	0	--	--	--	--	2	0	2	0	0	0	20	20
JUL 23....	7200	7200	40	--	--	--	--	3	1	2	100	90	90	9	9
AUG 19....	--	--	--	--	--	--	--	--	--	2	2	100	90	90	10

DATE	BERYL-LIUM, TOTAL DIS-SOLVED (UG/L AS BE)	BORON, SUS-PENDED RECOV-ERABLE (UG/L AS B)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CR)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, TOTAL DIS-SOLVED RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, TOTAL DIS-SOLVED RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, TOTAL DIS-SOLVED RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, TOTAL DIS-SOLVED RECOV-ERABLE (UG/L AS CR)
APR ' 1980	MAY ' 30 . . .	JUN ' 12 . . .	JUL ' 25 . . .	AUG ' 23 . . .	SEP ' 19 . . .					
16 . . .	--	--	--	0	0	1	10	10	0	0
MAY ' 30 . . .	<1	50	<10	30	0	--	<1	0	0	8
JUN ' 12 . . .	--	40	30	9	2	--	<1	0	0	4
JUL ' 25 . . .	--	80	70	10	0	0	<1	10	0	15
AUG ' 23 . . .	--	40	10	30	1	--	<1	20	0	4
SEP ' 19 . . .	<1	80	10	70	0	--	<1	20	10	4
	--	--	--	0	--	<1	0	0	0	7

## 14244200 - COWLITZ RIVER AT KELSO, WASH.

WATER QUALITY DATA											
DATE	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, SUS-PENDED (UG/L AS CU)		IRON, SUS-TOTAL (UG/L AS CU)		IRON, DIS-RECOVERABLE (UG/L AS CU)		LEAD, RECov-ERABLE (UG/L AS FE)		LITHIUM, RECov-ERABLE (UG/L AS LI)	
		COPPER, TOTAL (UG/L AS CU)	RECov-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, RECov-ERABLE (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, RECov-ERABLE (UG/L AS FE)	LEAD, SUS-PENDED (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM, RECov-ERABLE (UG/L AS LI)	
APR * 1980	<3	2	0	2	400	350	50	5	2	3	
MAY	<3	77	--	<10	12000	12000	24	22	12	--	
JUN	<3	69	66	3	10000	9900	90	10	7	--	
12***	<3	110	110	4	45000	45000	70	21	18	--	
17***	<3	110	110	2	8000	7900	80	12	9	20	
25***	<3	52	--	<10	3000	2900	91	12	0	--	
JUL	<3	110	110	2	14000	14000	60	12	12	0	
23***	<3	110	110	2	14000	14000	60	12	10	--	
AUG	<3	110	110	2	14000	14000	60	12	10	--	
19***	<3	110	110	2	14000	14000	60	12	10	--	
DATE	LITHIUM, DIS-SOLVED (UG/L AS LI)	MANGANESE, SUS-PENDED (UG/L AS MN)		MANGANESE, TOTAL (UG/L AS MN)		MERCURY, RECov-ERABLE (UG/L AS HG)		MERCURY, SUS-PENDED (UG/L AS HG)		MOLYBDENUM, RECov-ERABLE (UG/L AS MO)	
		MANGANESE, RECov-ERABLE (UG/L AS MN)	SUS-PENDED (UG/L AS MN)	MANGANESE, RECov-ERABLE (UG/L AS MN)	TOTAL (UG/L AS MN)	MERCURY, RECov-ERABLE (UG/L AS HG)	DIS-SOLVED (UG/L AS HG)	MERCURY, RECov-ERABLE (UG/L AS HG)	DIS-SOLVED (UG/L AS HG)	MOLYBDENUM, RECov-ERABLE (UG/L AS MO)	
APR * 1980	--	10	5	.0	.0	.0	.0	<10	--	7	
16***	<4	370	240	110	.1	.1	.0	<10	10	7	
MAY	<4	290	200	.0	.0	.0	.0	--	6	4	
30***	<4	900	790	110	.2	.2	.0	--	17	14	
JUN	<4	230	160	70	.2	.2	.0	--	33	31	
12***	<4	110	60	49	.1	.1	.0	<10	87	87	
17***	0	900	790	110	.0	.0	.0	--	0	0	
25***	<4	230	160	70	.2	.2	.0	--	0	0	
JUL	<4	110	60	49	.1	.1	.0	--	30	29	
23***	<4	360	250	110	.0	.0	.0	--	1	1	
AUG	--	360	250	110	.0	.0	.0	--	40	40	
19***	<4	360	250	110	.0	.0	.0	--	1	1	

## 14244200 - COWLITZ RIVER AT KELSO, WASH.

## WATER QUALITY DATA

DATE AS SE)	SELE- NIUM, SUS- PENDED TOTAL TOTAL (UG/L (UG/L DATE AS SE)	SILVER, NIUM, TOTAL RECOV- ERABLE SOLVED (UG/L (UG/L AS AG)	SILVER, SUS- TOTAL RECOV- ERABLE SOLVED (UG/L (UG/L AS AG)	SILVER, DIS- PENDED RECOV- ERABLE SOLVED (UG/L (UG/L AS SR)	SILVER, DIS- PENDED RECOV- ERABLE SOLVED (UG/L (UG/L AS V)	VANA- DIUM, DIS- SOLVED SOLVED (UG/L (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE SOLVED (UG/L (UG/L AS ZN)
		SILVER, NIUM, TOTAL RECOV- ERABLE SOLVED (UG/L (UG/L AS AG)	SILVER, DIS- PENDED RECOV- ERABLE SOLVED (UG/L (UG/L AS AG)	SILVER, DIS- PENDED RECOV- ERABLE SOLVED (UG/L (UG/L AS SR)	SILVER, DIS- PENDED RECOV- ERABLE SOLVED (UG/L (UG/L AS V)	SILVER, DIS- PENDED RECOV- ERABLE SOLVED (UG/L (UG/L AS ZN)	
APR 19 1960		0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	-- -- -- -- -- --	20 20 20 20 20 20	5 5 5 5 5 5
16***	0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	-- -- -- -- -- --	20 20 20 20 20 20	5 5 5 5 5 5
MAY 30***	0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	<6.0 <6.0 <6.0 <6.0 <6.0 <6.0	80 80 80 80 80 80	5 5 5 5 5 5
JUN 12***	0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	-- -- -- -- -- --	90 90 90 90 90 90	10 10 10 10 10 10
17***	1	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	-- -- -- -- -- --	130 130 130 130 130 130	20 20 20 20 20 20
25***	0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	-- -- -- -- -- --	150 150 150 150 150 150	7 7 7 7 7 7
JUL 23***	0	0 0 1 1 0 0	0 0 1 1 0 0	0 0 1 1 0 0	29 <6.0 <6.0 <6.0 <6.0 <6.0 <6.0	30 30 30 30 30 30	12 12 12 12 12 12
AUG 16	0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	-- -- -- -- -- --	70 70 70 70 70 70	-- -- -- -- -- --
19***	0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	<3 <3 <3 <3 <3 <3		

## 461053122030700 - MUDDY RIVER HILW SMITH CK NEAR COUGAR, WA

WATER QUALITY DATA							
SPE- CIFIC CON- DUCT- ANCE (MICRO- MHO'S)	TIME DATE	TEMPER- ATURE, WATER (DEG C)	TURB- ID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L) AS CACO3)	ACIDITY (MG/L) AS CACO3)	CALCIUM DIS- SOLVED (MG/L) AS CACO3)
JUL 29... 1980 0855	29...	7.6	10.0	11.00	10.6	11.4	.0
							3.4
							7.7
							4.3
							4.7
ALKALINITY (MG/L) AS CACO3)	DATE	CARBON DIOXIDE DIS- SOLVED (MG/L) AS CO2)	SULFATE DIS- SOLVED (MG/L) AS SO4)	CHLORIDE, DIS- SOLVED (MG/L) AS CL)	FLUORIDE, DIS- SOLVED (MG/L) AS F)	SILICA, DIS- SOLVED (MG/L) AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) AS SiO2)
JUL 29... 1980 110	29...	4.3	46	42	.4	28	334
							276
							.45
							.00
							.01
							.020
NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N)	DATE	NITRO- GEN, ORGANIC TOTAL (MG/L) AS N)	NITRO- GEN, AM- MONIA + ORG. ORGANIC TOTAL (MG/L) AS N)	NITRO- GEN, NH4 + ORG. SUSP. TOTAL (MG/L) AS N)	NITRO- GEN, AM- MONIA + ORG. ORGANIC TOTAL (MG/L) AS N)	NITRO- GEN, DIS- SOLVED (MG/L) AS N)	NITRO- GEN, DIS- SOLVED (MG/L) AS N)
JUL 29... 1980 .000	29...	1.3	.91	1.4	.49	.91	1.4
							.92
							1.600
							.020
							4.6
							4.7

## 461053122030700 - MUDDY RIVER HLW SMITH CK NEAR COUGAR, WA

## WATER QUALITY DATA

ALUM- INUM, TOTAL RECOV- ERABLE (UG/L DATE	ALUM- INUM, SUS- PENDED RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	SUS- PENDED RECOV. (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)
JUL , 1980 29... 11000	11000	30	8	4	4	200	200	40
BERYL- LIUM, OIS- SOLVED (UG/L DATE	BORON, TOTAL RECOV- ERABLE (UG/L AS BE)	SUS- PENDED RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)
JUL , 1980 29... <1	220	0	260	0	0	2	20	10
CHRO- MIUM, DIS- SOLVED (UG/L DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CR)	SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
JUL , 1980 29... 10	16	13	3	77	<10	22000	19000	2900
LEAD, TOTAL RECOV- ERABLE (UG/L DATE	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS PB)	LITHIUM SUS- PENDED RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JUL , 1980 29... 10	0	<10	50	7	43	2400	400	2000
MERCURY TOTAL RECOV- ERABLE (UG/L DATE	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDED RECOV. (UG/L AS SE)
JUL , 1980 29... .1	.1	.0	<10	24	20	4	0	0
SELE- NIUM, DIS- SOLVED (UG/L DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS SE)	SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS AG)	VANA- DIUM, DIS- SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
JUL , 1980 29... 0	0	0	0	180	11	100	100	3

## 461101122031300 - TRIBUTARY TO MUDDY RIVER NR HEADWATERS

## WATER QUALITY DATA

SPE- CIFIC CON- DUCT- ANCE (MICRO- MHO'S)	TIME DATE	TEMPER- ATURE, FIELD (UNITS)	TUR- BID- ITY (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L) AS CACO3)	ACIDITY (MG/L) AS CACO3)	CALCIUM DIS- SOLVED (MG/L) AS CACO3)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS Mg)	SODIUM, DIS- SOLVED (MG/L) AS Na)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K)
JUL 29 1980 0930	96	7.3	6.4	.70	10.6	32	9.9	8.9	2.6	5.4
ALKALINITY (MG/L AS CACO3)	DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
JUL 29 1980 26	20.0	9.9	8.7	.3	.3	24	.66	.76	.09	.05
NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	DATE	NITRO- GEN, ORGANIC DIS- TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, NH4 MONIA + ORG. ORGANIC SUSP. TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORG. ORGANIC SUSP. TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC DIS- TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)
JUL 29 1980 .000	.40	.26	.40	.14	.26	.45	.31	.220	.030	.2

## 461101122031300 - TRIBUTARY TO MUDDY RIVER NR HEADWATERS

WATER QUALITY DATA							
	ALUM- INUM,	ALUM- INUM,	ARSENIC SUS- PENDED	BARIUM, SUS- PENDED	BARIUM, TOTAL, DIS- RECOV- ERABLE	BORON, SUS- PENDED	BORON, TOTAL, DIS- RECOV- ERABLE
DATE	TOTAL RECov- ERABLE (UG/L AS AL)	DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	SOLVED (UG/L AS AS)	RECov- ERABLE (UG/L AS BA)	LITUM, SOLVED (UG/L AS BA)	LITUM, SOLVED (UG/L AS BA)
JUL 29... 1980	390	380	10	3	2	1	0
					0	0	100
					10	<1	100
					10	100	50
	CAUIMUM TOTAL	CADMIUM DIS- SOLVED	CHRO- MUM, RECov- ERABLE	CHRO- MUM, TOTAL, RECov- ERABLE	COHALT, TOTAL, DIS- SOLVED	COPPER, TOTAL, DIS- SOLVED	IRON, TOTAL, RECov- ERABLE
DATE	TOTAL RECov- ERABLE (UG/L AS B)	DIS- SOLVED (UG/L AS CD)	CHRO- MUM, RECov- ERABLE (UG/L AS CR)	CHRO- MUM, TOTAL, RECov- ERABLE (UG/L AS CR)	COHALT, TOTAL, DIS- SOLVED (UG/L AS CU)	COPPER, TOTAL, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL, RECov- ERABLE (UG/L AS FE)
JUL 29... 1980	50	0	<1	0	0	160	<10
					2	<3	130
					10	<10	<10

## 461101122031300 - TRIBUTARY TO MUDDY RIVER NR HEADWATERS

## WATER QUALITY DATA

DATE	LEAD, AS PB)	SUS- PENDED RECOV- ERABLE (UG/L)	LEAD, AS PB)	LITHIUM TOTAL DIS- ERABLE (UG/L)	LITHIUM SUS- PENDED RECOV- ERABLE (UG/L)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L)	MANGA- NESE, DIS- SOLVED (UG/L)	
JUL , 1980 29...	12	0	<10	10	0	14	10	<1

DATE	MERCURY AS HG)	MERCURY AS HG)	MOLYB- DIS- ERABLE (UG/L)	NICKEL, DENUM, DIS- SOLVED (UG/L)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L)	SELE- NIUM, NIMUM, DIS- SOLVED (UG/L)	SELE- NIUM, TOTAL SOLVED (UG/L)		
JUL , 1980 29...	.0	.0	.0	<10	10	9	1	0	0

DATE	SELE- NIUM, DIS- SOLVED (UG/L)	SILVER, TOTAL RECOV- ERABLE (UG/L)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L)	STRON- TIUM, DIS- SOLVED (UG/L)	VANA- DIUM, DIS- SOLVED (UG/L)	ZINC, TOTAL RECOV- ERABLE (UG/L)	ZINC, DIS- SOLVED (UG/L)	
JUL , 1980 29...	0	1	1	0	38	11	100	<3

446121-122171600 - SF TOUTLE NEAR DISAPPOINTMENT Ck (CLEAR SIDE)

WATER QUALITY DATA

SPÉ- CIFIC CON- DUCT- ANCE (MICRO- MHO'S)	TIME DATE	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)
JUL , 1980 29... .	1130	53	6.8	12.0	1.6	9.1	18	5.2	1.4
CARBON DIOXIDE SULFATE DIS- SOLVED (MG/L AS CO2)	CHLO- RIDE, DIS- SOLVED (MG/L AS SO4)	FLUO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS F)	SOLIDS. RESIDUE AT 180 DEG. C DIS- SOLVED (TONS PER AC-FT)	SOLIDS. SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AS SiO2)	SOLIDS. SUM OF CONSTI- TUENTS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
JUL , 1980 29... .	4.0	5.7	1.6	.3	26	55	.07	.00	.00
NITRO- GEN, ORGANIC ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORG. ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORG. SUSP. ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)
JUL , 1980 29... .	.42	.34	.42	.06	.36	.42	.36	.160	.020

## 461215122171600 - SF TOUTLE NEAR DISAPPOINTMENT CR (CLEAR SIDE)

## WATER QUALITY DATA

	ALUM- INUM, TOTAL RECOV- ERABLE DATE	ALUM- INUM, SUS- PENDED RECOV. ERABLE (UG/L) AS AL)	ALUM- INUM, DIS- SOLVED RECOV. ERABLE (UG/L) AS AL)	ARSENIC ARSENIC TOTAL (UG/L) AS AS)	SUS- PENDED RECOV. ERABLE (UG/L) AS AS)	ARSENIC TOTAL (UG/L) AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L) AS BA)	BARIUM, SUS- PENDED RECOV. ERABLE (UG/L) AS BA)
JUL , 1980								
29...	200	190	10	2	1	1	100	90
BARIUM, DIS- SOLVED (UG/L) AS BA)	BERYL- LIUM, SOLVED (UG/L) AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L) AS B)	BORON, SUS- PENDED RECOV. ERABLE (UG/L) AS B)	CADMIUM BORON, DIS- SOLVED RECOV. ERABLE (UG/L) AS CD)	CADMIUM TOTAL RECOV- ERABLE (UG/L) AS CD)	CADMIUM DIS- SOLVED RECOV. ERABLE (UG/L) AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L) AS CR)	CHRO- MIUM, SUS- PENDED RECOV. ERABLE (UG/L) AS CR)
JUL , 1980								
29...	9	<1	30	10	20	0	<1	10
CHRO- MIUM, DIS- SOLVED (UG/L) AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L) AS CO)	COBALT, DIS- SOLVED (UG/L) AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L) AS CU)	COPPER, DIS- SOLVED RECOV. ERABLE (UG/L) AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L) AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L) AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L) AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L) AS FE)
JUL , 1980								
29...	0	4	<3	48	<10	530	210	320
LEAD, TOTAL RECOV- ERABLE (UG/L) AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L) AS PB)	LITHIUM LEAD, DIS- SOLVED (UG/L) AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L) AS LI)	LITHIUM SUS- PENDED RECOV- ERABLE (UG/L) AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L) AS MN)	MANGA- NESE, SUS- PENDED RECOV- ERABLE (UG/L) AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L) AS MN)	MANGA- NESE, SUS- PENDED RECOV- ERABLE (UG/L) AS MN)
JUL , 1980								
29...	10	0	<10	0	0	8	50	0
MERCURY TOTAL RECOV- ERABLE (UG/L) AS HG)	MERCURY SUS- PENDED RECOV- ERABLE (UG/L) AS HG)	MOLYB- DENUM, SOLVED (UG/L) AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L) AS MO)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L) AS NI)	NICKEL, TOTAL RECOV- ERABLE (UG/L) AS NI)	NICKEL, DIS- SOLVED RECOV- ERABLE (UG/L) AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L) AS SE)	SELE- NIUM, SUS- PENDED RECOV- ERABLE (UG/L) AS SE)
JUL , 1980								
29...	.0	.0	.0	<10	10	6	4	0
SELE- NIUM, DIS- SOLVED (UG/L) AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L) AS AG)	SILVER, SUS- PENDED RECOV- ERABLE (UG/L) AS AG)	STRON- TIUM, DIS- SOLVED RECOV. ERABLE (UG/L) AS AG)	VANA- DIUM, DIS- SOLVED RECOV. ERABLE (UG/L) AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L) AS V)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L) AS ZN)	ZINC, TOTAL RECOV- ERABLE (UG/L) AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L) AS ZN)
JUL , 1980								
29...	0	0	0	0	23	<6.0	40	40

## 461219122171900 - SF TOUTLE NEAR DISAPPOINTMENT Ck (Muddy Side)

## WATER QUALITY DATA

Sp <sub>t</sub> - CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TIME DATE	PH FIELD (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARO- NESS AS CACO <sub>3</sub> )	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CaCO <sub>3</sub> )	
JUL 29... 1980	1200	150	7.8	15.1	830	8.7	33	9.5	2.4	15	2.4	4.3
CARBON DIOXIDE DIS- SOLVED (MG/L AS CO <sub>2</sub> )	DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO <sub>2</sub> )	SOLIDS, RESIDUE AT 180 DEG. C	SOLIDS, CONSTI- TUENTS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (MG/L AS N)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	
JUL 29... 1980	1.0	11	10	.3	29	105	106	.14	.02	.03	.020	.000
NITRO- GEN, ORGANIC DIS- TOTAL (MG/L AS N)	DATE	NITRO- GEN, AM- MONIA + ORG. ORGANIC SUSP. TOTAL (MG/L AS N)	NITRO- GEN, NH <sub>4</sub> MONIA + ORG. TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC OIS. TOTAL (MG/L AS N)	NITRO- GEN, GEN. TOTAL (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)	145	
JUL 29... 1980	.65	.32	.67	.35	.32	.69	.35	7.700	.060	1.3	1.4	

461219122171900 - SF TOUTLE NEAR DISAPPOINTMENT CK (MUDDY SIDE)

## WATER QUALITY DATA

ALUM- INUM, TOTAL RECOV- ERABLE DATE	ALUM- INUM, SUS- PENDED RECOV. (UG/L AS BA)	ALUM- INUM, DIS- RECOV- ERABLE (UG/L AS AL)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	SUS- PENDED RECOV- ERABLE (UG/L AS BA)
<b>JUL , 1980</b>							
29... 23000	23000	30	9	7	2	200	200
<b>BORON,</b>							
BARIUM, LIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	SUS- PENDED RECOV- ERABLE (UG/L AS B)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
<b>JUL , 1980</b>							
29... 8	<1	1200	1100	80	0	<1	20
<b>IRON,</b>							
CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
<b>JUL , 1980</b>							
29... 0	20	<3	390	<10	34000	34000	49
<b>LITHIUM</b>							
LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	SUS- PENDED RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV- ERABLE (UG/L AS MN)
<b>JUL , 1980</b>							
29... 21	0	<10	50	30	21	840	750
<b>NICKEL,</b>							
MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, NICKEL, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDED RECOV- ERABLE (UG/L AS SE)
<b>JUL , 1980</b>							
29... .1	.1	.0	<10	50	47	3	0
<b>SILVER,</b>							
SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, SOLVED (UG/L AS SR)	VANA- DIUM, SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
<b>JUL , 1980</b>							
29... 0	2	2	0	40	11	100	<3

## 461742122233900 - GREEN POND #1 ON DEBHIS DAM

## WATER QUALITY DATA

SPCIFIC CONDUCTANCE (MICRO-MHOS)	TIME	DATE	PH FIELD (UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS AS (MG/L)	ACIDITY AS (MG/L)	CALCIUM DIS-SOLVED (MG/L)	MAGNESIUM DIS-SOLVED (MG/L)	POTASSIUM DIS-SOLVED (MG/L)
JUL 30... 1980	1530	JUL 30... 1980	7.4	21.5	18	7.9	324	.0	100	18	.85
											11
CARBON DIOXIDE	SULFATE	ALKALINITY (MG/L AS CO <sub>3</sub> )	DIS-SOLVED (MG/L AS SO <sub>4</sub> )	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C	SOLVENTS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, SUM OF SOLVENTS, DIS-SOLVED (MG/L AS N)	NITROGEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (MG/L AS N)	NITROGEN, NO <sub>2</sub> +NO <sub>3</sub> GEN, AMMONIA TOTAL (MG/L AS N)
NITRO-GEN, AMMONIA	NITRO-GEN, ORGANIC	NITRO-GEN, ORGANIC	NITRO-GEN, ORGANIC	NITRO-GEN, AMMONIA + ORG. SUSP.	NITRO-GEN, ORGANIC	NITRO-GEN, MONIA + ORG. SUSP.	NITRO-GEN, TOTAL DIS. (MG/L AS N)	NITRO-GEN, TOTAL SOLVED (MG/L AS N)	PHOSPHORUS, PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC SUS-PENDED (MG/L AS C)
JUL 30... 1980	.52	JUL 30... 1980	3.2	31.0	110	.5	22	703	690	.95	.02
											.010

## 461742122233900 - GREEN POND #1 ON DEBRIS DAM

## WATER QUALITY DATA

ALUM- INUM, TOTAL RECOV- ERABLE DATE	ALUM- INUM, SUS- PENDED RECOV. (UG/L AS BA)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC ARSENIC TOTAL (UG/L AS AS)	SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)
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JUL , 1980  
30... 670 660 10 3 1 2 0 0

BARIUM, LIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, SUS- PENDED RECOV- ERABLE (UG/L AS B)	CAUIMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMUM DIS- SOLVED ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)
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JUL , 1980  
30... 30 <1 290 0 380 0 <1 30 20

CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)
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JUL , 1980  
30... 10 0 0 4 10 <10 560 <10

LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDED RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)
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JUL , 1980  
30... 20 0 <10 60 0 63 1500 0 1600

MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE)
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JUL , 1980  
30... .0 .0 .0 <10 30 20 10 0 0

SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SUS- PENDED RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, SOLVED (UG/L AS SR)	VANA- DIUM, SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN)
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JUL , 1980  
30... 0 0 0 0 400 <6.0 20 20 3

## 461743122234300 - RED POND #1 ON DEBRIS DAM

## WATER QUALITY DATA

DATE	TIME	FIELD (UNITS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	HARD- NESS (MG/L AS CACO <sub>3</sub> )	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO <sub>2</sub> )	
							SOLIDS, RESIDUE AT 180 DEG. C (MG/L AS SiO <sub>2</sub> )	SOLIDS, SUM OF CONSTITUENTS, SOLVED (MG/L AS SiO <sub>2</sub> )	SOLIDS, TOTAL PER (MG/L AC-FT)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
JUL 30... 1980	1615	3050	8.4	26.8	4.8	901	250	67	350	33	200
JUL 30... 1980	1940	360	1.2	28	2260	2162	3.07	.01	.02	.030	.040
JUL 30... 1980	1.4	1.2	1.5	.20	1.3	1.5	1.3	.100	.010	.21	1.3

## 461743122234300 - RED POND #1 ON DEBRIS DAM

## WATER QUALITY DATA

ALUM- INUM, TOTAL RECOV- ERABLE (UG/L DATE	ALUM- INUM, SUS- PENDED RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- SOLVED RECOV. (UG/L AS AL)	ARSENIC ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	
JUL , 1980 30... .	170	160	10	19	4	15	100	70	30
BERYL- LIUM, DIS- SOLVED (UG/L DATE	BORON, SUS- PENDED RECOV- ERABLE (UG/L AS BE)	BORON, DIS- SOLVED RECOV. (UG/L AS B)	CADMIUM BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED RECOV. (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	
JUL , 1980 30... .	1	1000	0	1200	0	0	2	30	20
CHRO- MIUM, DIS- SOLVED (UG/L DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, DIS- SOLVED RECOV. (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED RECOV. (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV. (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	
JUL , 1980 30... .	10	0	<3	10	0	10	870	<10	
LEAD, TOTAL RECOV- ERABLE (UG/L DATE	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED RECOV. (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDED RECOV- ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED RECOV. (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	
JUL , 1980 30... .	20	0	<10	220	120	96	3300	1900	1400
MERCURY TOTAL RECOV- ERABLE (UG/L DATE	MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED RECOV. (UG/L AS HG)	MOLYB- DENUM, SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED RECOV. (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDED RECOV. (UG/L AS SE)	
JUL , 1980 30... .	.1	.1	.0	16	40	31	9	0	0
SELE- NIUM, DIS- SOLVED (UG/L DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, DIS- SOLVED RECOV. (UG/L AS AG)	SILVER, SOLVED (UG/L AS AG)	STROH- TIUM, SOLVED (UG/L AS AG)	VANA- DIUM, SOLVED (UG/L AS SR)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED RECOV. (UG/L AS ZN)	ZINC, DIS- SOLVED RECOV. (UG/L AS ZN)	
JUL , 1980 30... .	0	0	0	0	470	<3.0	20	<3	

461758122253100 - NF TOUTLE RIVER DEBRIS DAM (LEFT SIDE)

## WATER QUALITY DATA

SPE- CIFIC CON- DUCT- ANCE	TEMPER- ATURE, WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO <sub>3</sub> )	CALCIUM DIS- SOLVED (MG/L AS CA)	SODIUM, DIS- SOLVED (MG/L AS NA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS K)	POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LINITY (MG/L AS CACO <sub>3</sub> )			
DATE	TIME	FIELD (UNITS)										
JUL 30... 1980 30.000	1315	240	7.03	19.2	3.03	9.0	61	17	.47	20	2.3	4.9
CARBON DIOXIDE	SULFATE DIS- SOLVED (MG/L AS SO <sub>4</sub> )	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO <sub>2</sub> )	SOLIDS, RESIDUE AT 180 DEG. C (MG/L AS SiO <sub>2</sub> )	SOLIDS, SUM OF CONSTI- TUENTS, SOLVED (TONS PER AC-FT)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)		
JUL 30... 1980 30.000	3.9	34	18	.2	27	162	.22	.03	.03	.000	.000	
NITRO- GEN, ORGANIC	ORGANIC DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN+NH <sub>4</sub> MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED (MG/L AS C)		
JUL 30... 1980 30.000	.56	.32	.56	.24	.32	.59	.35	.060	.030	.25	.3	

461758122253100 - NF TOUTLE BLW DEBRIS DAM (LEFT SIDE)

## WATER QUALITY DATA

ALUM- INUM, TOTAL RECOV- ERABLE (UG/L DATE	ALUM- INUM, SUS- PENDED RECov- ERABLE (UG/L AS AL)	ALUM- INUM, DIS- RECOV. (UG/L AS AL)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECov- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECov- ERABLE (UG/L AS BA)
JUL , 1980 30... 340	300	40	3	1	2	100	80
BARIUM, DIS- SOLVED (UG/L DATE AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	HORON, SUS- PENDED ERABLE (UG/L AS B)	BORON, DIS- RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECov- ERABLE (UG/L AS CR)
JUL , 1980 30... 20	<1	80	10	70	0	<1	10
CHRO- MIUM, DIS- SOLVED (UG/L DATE AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECov- ERABLE (UG/L AS FE)
JUL , 1980 30... 0	2	<3	0	<10	1200	690	510
LEAD, TOTAL RECOV- ERABLE (UG/L DATE AS PB)	LEAD, SUS- PENDED RECov- ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	LITHIUM SUS- PENDED ERABLE (UG/L AS LI)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECov- ERABLE (UG/L AS MN)
JUL , 1980 30... 13	0	<10	0	0	11	300	0
MERCURY TOTAL RECOV- ERABLE (UG/L DATE AS HG)	MERCURY SUS- PENDED RECov- ERABLE (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDED ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDED RECov- ERABLE (UG/L AS SE)
JUL , 1980 30... .0	.0	.0	<10	9	7	2	0
SELE- NIUM, DIS- SOLVED (UG/L DATE AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDED RECov- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDED RECov- ERABLE (UG/L AS ZN)
JUL , 1980 30... 0	0	0	0	87	<6.0	50	40

461825122250900 - NF TOUTLE BLW DERRIS DAM (RIGHT SIDE)

## WATER QUALITY DATA

SPECIFIC CONDUCTANCE (MICRO-MHOS)	TIME	TEMPERATURE, WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS AS (MG/L)	ACIDITY (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNESIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTASSIUM, DIS-SOLVED (MG/L AS K)			
DATE	JUL 30 1980	1430	174	7.1	20.4	3.4	8.1	5.0	4.9	1.3	4.4	1.3	2.3
ALKALINITY AS (MG/L AS CO2)	CARBON DIOXIDE SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLID RESIDUE AT 180 DEG C DIS-SOLVED (MG/L AS SiO2)	SOLID CONSTITUENTS, SOLVED (TONS PER AC-FT)	SOLID SUM OF CONSTITUENTS, SOLVED (MG/L AS N)	SOLID, SUM OF CONSTITUENTS, SOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
JUL 30 1980	42	5.3	28	16	.3	33	131	136	.17	.04	.03	.010	.04
NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITROGEN, MONIA + ORGANIC SUSP. TOTAL (MG/L AS N)	NITROGEN, MONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, MONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, MONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, MONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, MONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, MONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, PHOSPHORUS, TOTAL (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)
JUL 30 1980	.010	.57	.44	.58	.13	.45	.62	.48	.070	.040	.040	.5.9	.4

461825122250900 - NF TOUTLE BLW DEBRIS DAM (RIGHT SIDE)

## WATER QUALITY DATA

	ALUM- INUM, TOTAL RECOV- ERABLE DATE	ALUM- INUM, SUS- PENDED RECOV. (UG/L AS AL)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)
<b>JUL , 1980</b>								
30...	440	430	10	3	0	3	0	0
<b>BORON,</b>								
BARIUM, LIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, RECOV- ERABLE (UG/L AS BE)	BURON, TOTAL ERABLE (UG/L AS B)	SUS- PENDED ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV- ERABLE (UG/L AS CR)
JUL , 1980								
30...	10	<1	90	0	90	0	<1	20
<b>IRON,</b>								
CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL ERABLE (UG/L AS CU)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
JUL , 1980								
30...	0	0	<3	0	<10	1400	770	630
<b>LEAD,</b>								
LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM TOTAL ERABLE (UG/L AS LI)	LITHIUM SUS- PENDED ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL ERABLE (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, PENDED RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
JUL , 1980								
30...	10	0	<10	10	3	7	420	10
<b>MERCURY</b>								
MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SUS- PENDED RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYH- DENUM, SOLVED (UG/L AS HG)	NICKEL, TOTAL ERABLE (UG/L AS MO)	NICKEL, SUS- PENDED RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDED RECOV- ERABLE (UG/L AS SE)
JUL , 1980								
30...	.0	.0	.0	<10	30	29	1	0
<b>SILVER,</b>								
SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL ERABLE (UG/L AS AG)	SILVER, RECOV- ERABLE (UG/L AS AG)	STRON- TIUM, SOLVED (UG/L AS AG)	VANA- DIUM, SOLVED (UG/L AS SR)	ZINC, TOTAL ERABLE (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
JUL , 1980								
30...	0	0	0	0	78	<6.0	10	<3